Issue 129
PS
1963 Series
THE PREVENTIVE MAINTENANCE MONTHLY
BEFORE SHE TELLS US HOW MANY PARTS WE'RE GONNA NEED ON THIS EXERCISE SHE FIRST WANTSA KNOW..."HOW'S OUR OUTFIT ON PREVENTIVE MAINTENANCE!"
WILL EISNER

WATCH YOUR INTERVALS—

OPTIMUM

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And that's exactly what some of the Army's maintenance "wheels" have been doing since "Operation ARM" rolled out last year. They have been figuring out what the optimum (sorta like "best-all-around") intervals for scheduled maintenance services ought to be.

Now, the word is out. Some "optimums" have been found.

For example—

DA Circular 750-10 (26 Apr 63) told you users of tactical wheeled vehicles to drop the Q-service and do it every six months instead.

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And . . . scads of technical manuals and lubrication orders are getting changed. You may have seen some already.

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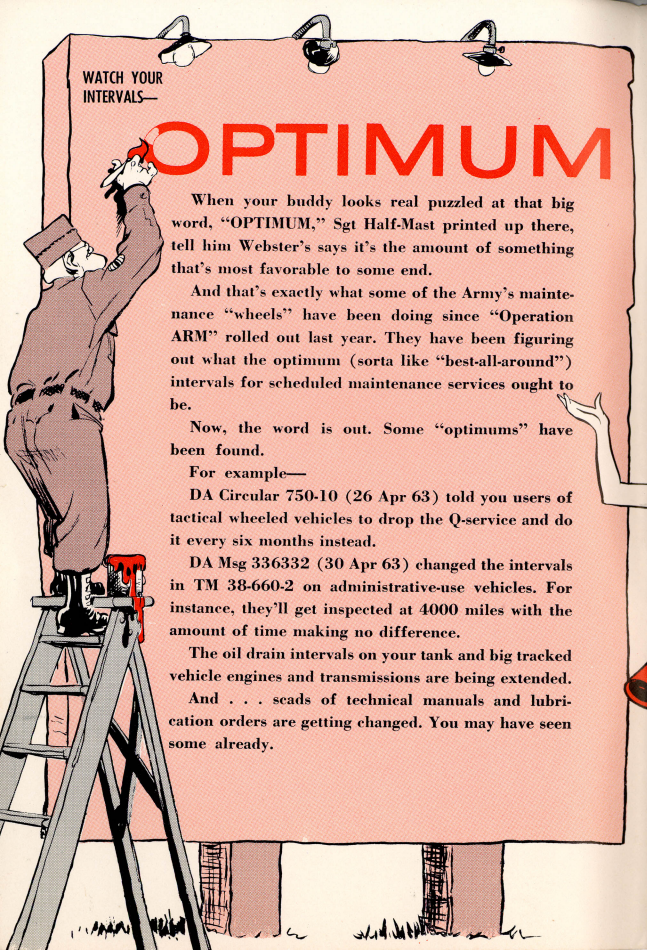

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Use of funds for printing of this publication has been approved by Headquarters, Department of the Army, 4 April 1962. DISTRIBUTION: In accordance with requirements submitted on DA Form 12-4.

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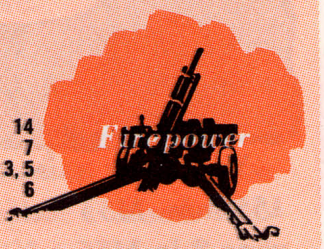

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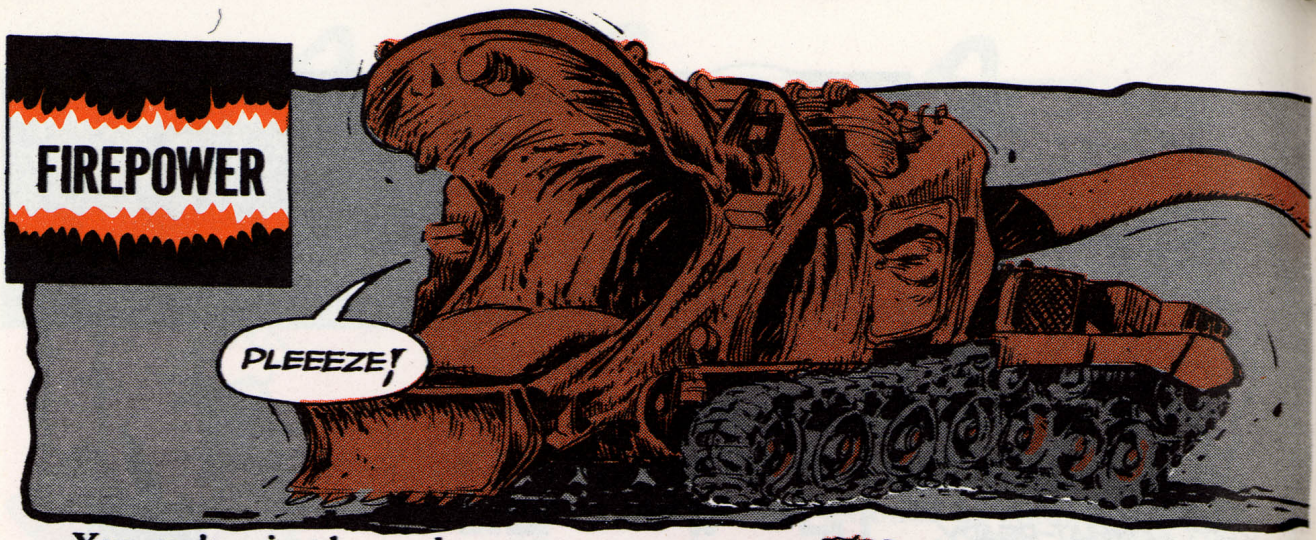
FIREPOWER



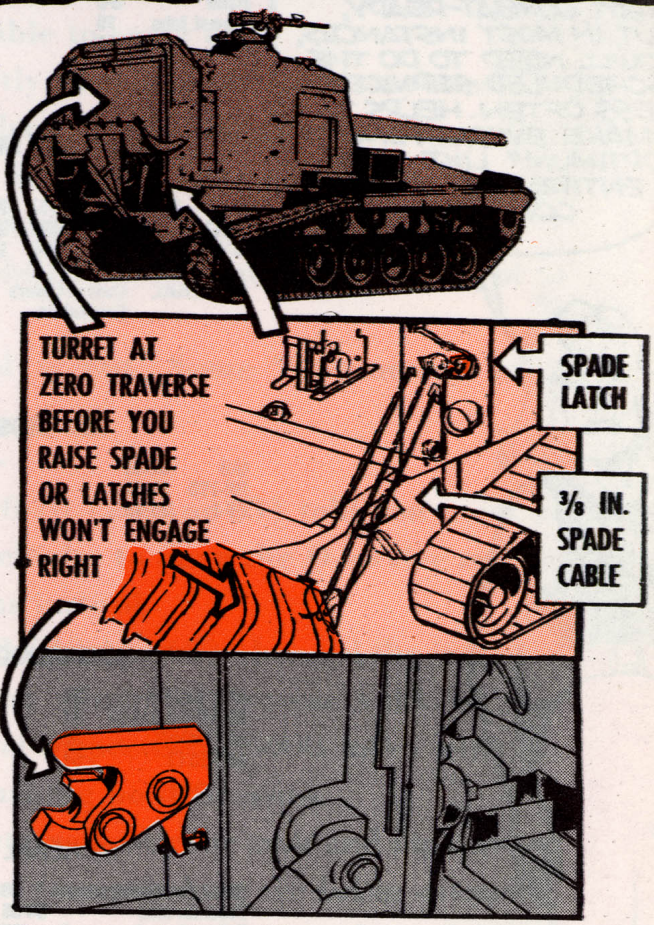
You can't raise the spade on your 155-mm M53 self-propelled gun or your 8-in M55 self-propelled howitzer if the spade cable's busted. Not likely that'll happen, tho, if you use it right.

First you want to make sure you've got the right cable.

All of the M53's and M55's should have been equipped with a ⅜-in two-part spade cable. That replaced the original ¼-in three-part line. If you didn't get yours, give a holler to your third echelon support unit and they'll put it on for you.

Once you've got the husky, ⅜-in cable, it is just a matter of operating right.

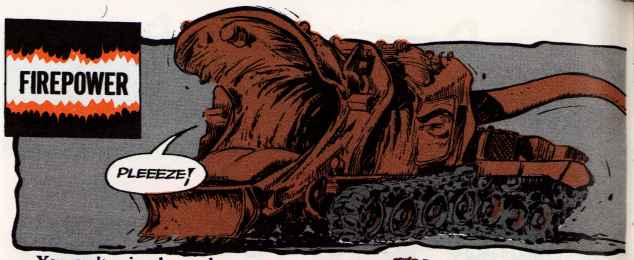
Remember, your turret has got to be at ZERO degrees traverse before you try to raise the spade. If you don't have the spade centered with the turret the spade latches won't engage right.



Once you hear the spade bang into the rear of the vehicle, shift your spade hoist into OFF position . . . but quick.

'Course the motor has a slip clutch to keep it from stalling when it's pulling the spade tight against the rear of the vehicle, but don't press your luck. Shift into OFF the second you hear that spade bang into the spade latches. If you can't hear it hit, get somebody with good hearing to clue you in.

Suppose you got to traverse the turret or back up the vehicle when the spade is down. Then you just unhook the pulley from the anchor lug and tie it out of the way. If you leave her hooked up, you're asking for a snapped cable—not to



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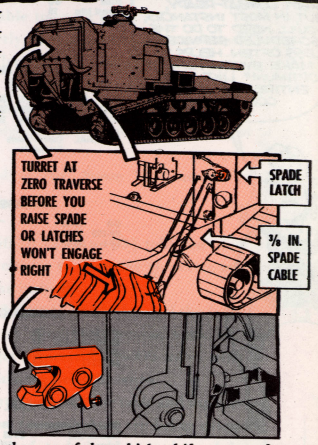

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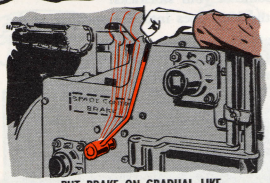
SPARE THE SPADE CABLE

mention maybe a snapped arm or leg.

Keep the cable wound tight on the drum. This stops a lot of trouble before it starts. Suddenly letting go of the hoist brake handle to stop the spade in free fall might snap the cable. Put the brake on gradual like.

Don't override and get slack in the cable. This could give you trouble when you raise the spade. The cable might jump out of the drum and wind up on the shaft when the spade's raised. This would put a sharp kink in the cable and it might snap under a sudden strain.

Eyeball your cable often, and if she's got some kinks, straighten 'em out. Strands are often cut when you put a load on a kinky cable.



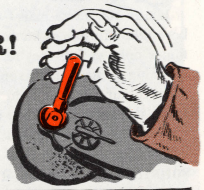
PUT BRAKE ON GRADUAL LIKE.

In real cold weather you might have to warm up the cable before you try to get the kinks out.

If you keep the cable snug around the pulleys it won't wander down to the axle and get flattened.

TM 9-2350-210-12 (Jul 59) has all the dope on this cable business. Keep your cable in shape. Then you can lower the spade and nobody can lower the boom on you.

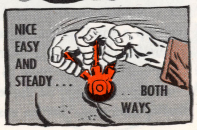
NO HIT 'ER!



Some heavy-handed types are doing themselves dirt by smacking the operating handle on their M34 firing mechanism instead of grabbing hold of it and moving it with a steady push or pull like you're supposed to.

The handle'll snap off if you hit it too hard or too sudden-like . . . and next thing you know your piece's lost its punch.

If this word gets to you too late and you have a busted M34 on your hands, don't forget your Ordnance support guys are the only ones who can fix it for you.



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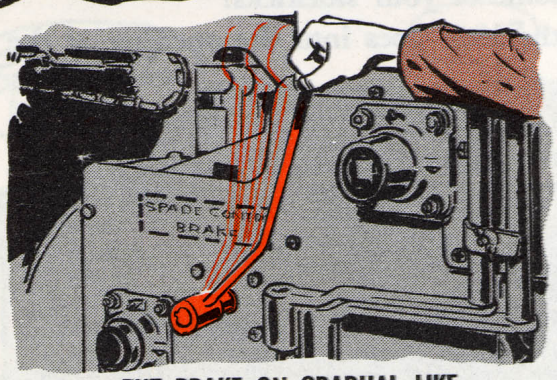

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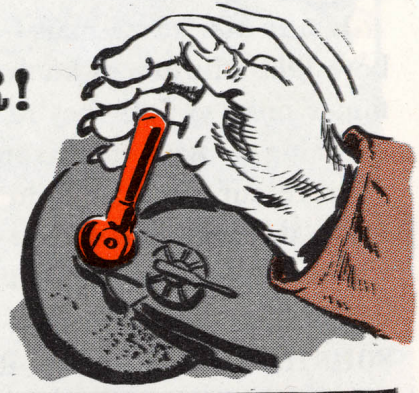
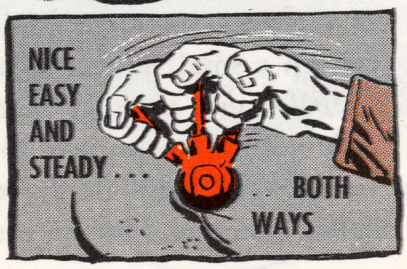




CHECK THAT LOOP

Tired of luggin' your M24 tripod around under your arms because you're afraid the wire loop on the carrying strap's gonna bust and drop the whole works on your pet corn—like it has on some of your sidekicks?

Could be nobody ever clued you that the loop goes into the opening at the base of the hinge—not on top.

Here's the right way to rig the loop of the carrying strap for the tripod of the M2 aiming circle. Pass this poop around to other readers of TM 9-6166.

Simple, right? OK, now check the loop on the tripod cover strap. Give it the same treatment and your corn-bustin' days are over.

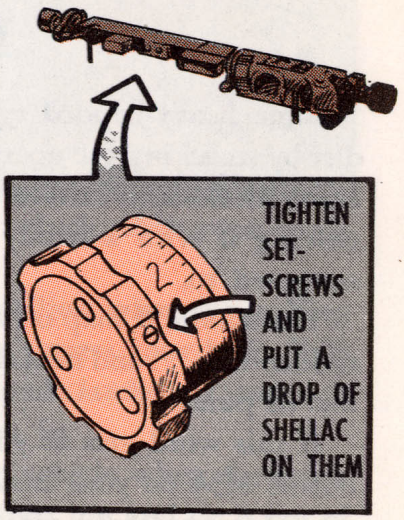
RIGHT TIGHT TO SIGHT

It sure can frost a man—when he goes to turn the boresight adjustment knobs on his M13-series range finder only to find they're loose.

Seeing as how this happens 'cause the setscrews (that're supposed to hold the knobs tight) work loose, the answer is to put a drop of shellac on the setscrews after you tighten 'em.

You can get ½-pt cans of the stuff under FSN 8010-165-6073 (DISC)—it's listed in Federal Supply Catalog C8000-SL, Vol 1, dated Apr 63 — or pick up a small jar on local purchase.

Shellac gets the nod over varnish for the job because—if the knobs have to be pulled at a later date—a drop of alcohol on the setscrews will dissolve the shellac and make for an easy removal operation.

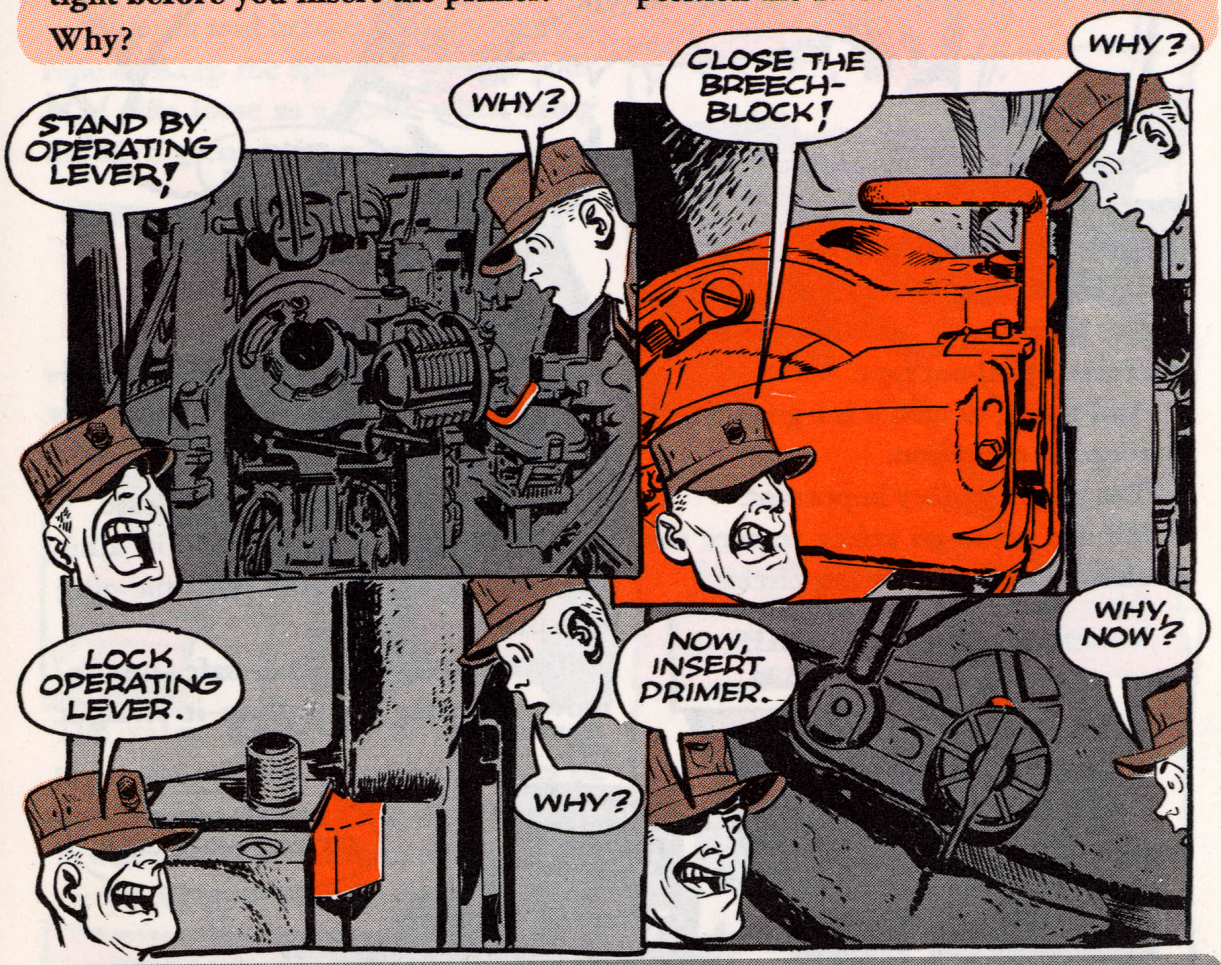


A WISE WHY?

A couple-three words to the wise oughta do it: **Close** the breechblock on your M44 medium howitzers all the way . . . **lock** the breech operating lever tight **before** you **insert** the primer.

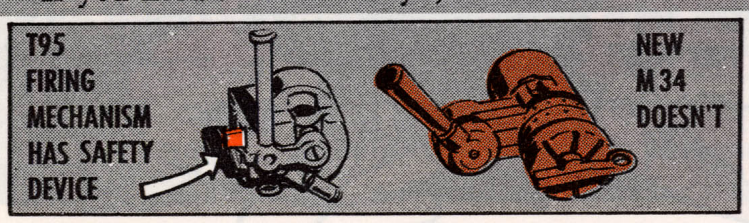
Why?

'Cause the M34 firing mechanism on these critters doesn't have a safety like the old T95's had. Which means the M34 can fire the primer no matter what position the breechblock's in.

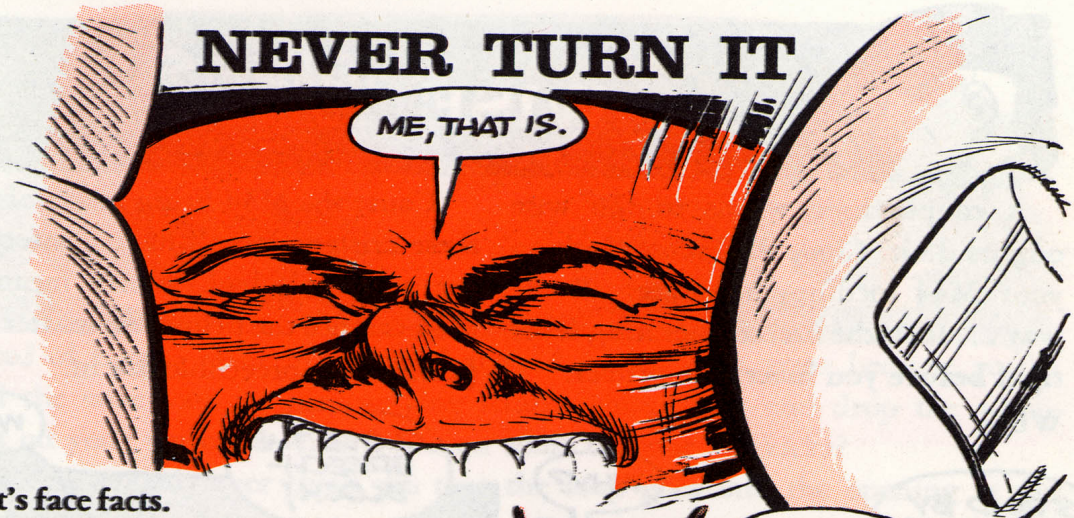


This applies as well to the M53 self-propelled 155-mm gun, the M55 8-in self-propelled howitzer and the M65 280-mm motorized heavy gun.

If you need another "why", look in Change 3 (20 Aug 62) to TM 9-2350-210-12 (30 Jul 59). And this warning's slated to show up in changes to all TM's dealing with these weapons.



NEVER TURN IT



Let's face facts.

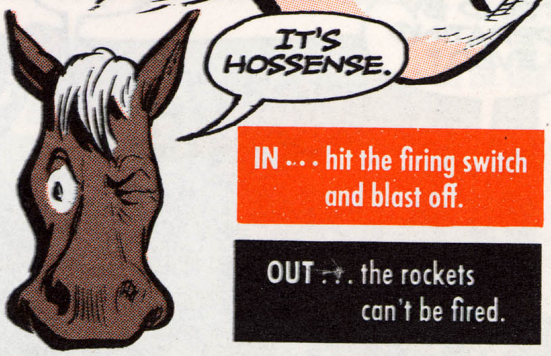
Some plugs can be unscrewed—and some can't.

Take the safety plug in the remote firing box of the M91 115-mm multiple rocket launcher . . . this baby is strictly the female pull-out type.

And trying to turn it is a good way to foul up the operation.

The plug's mighty important.

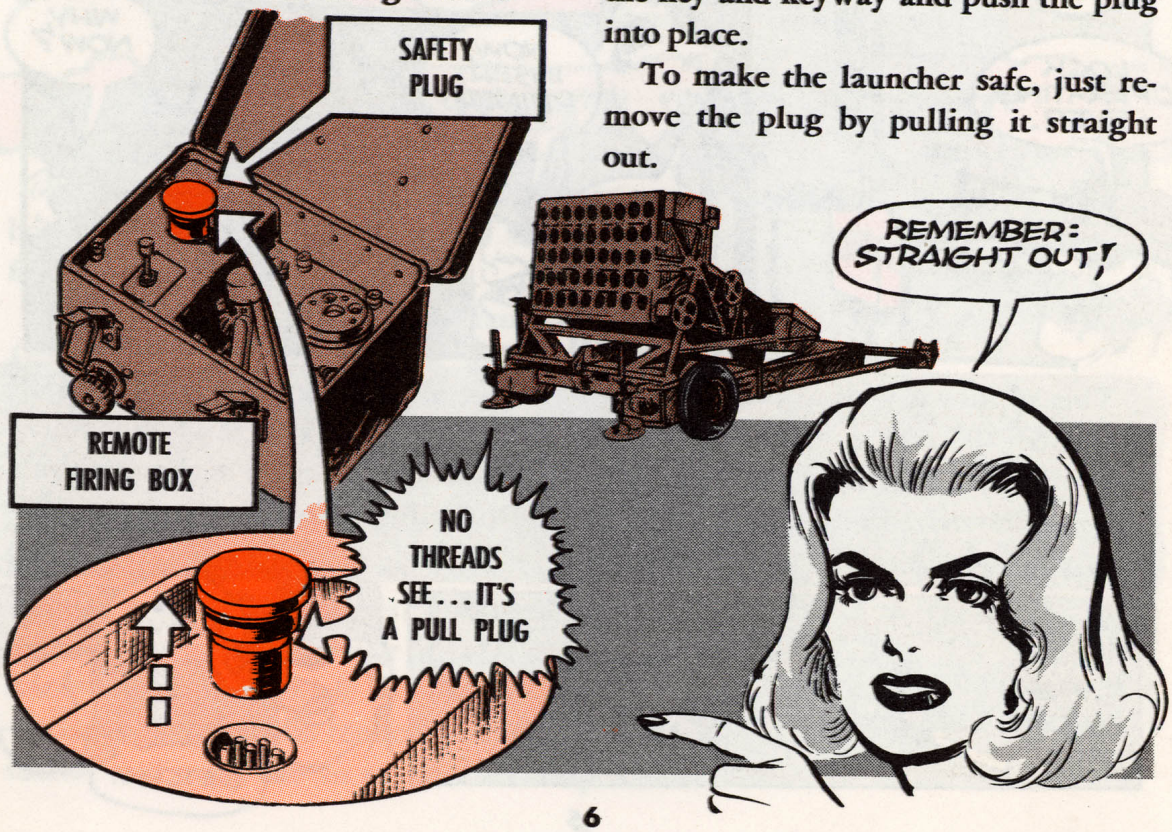
It's the go-no-go safety feature that makes or breaks the firing circuit.



No screwing around here—please.

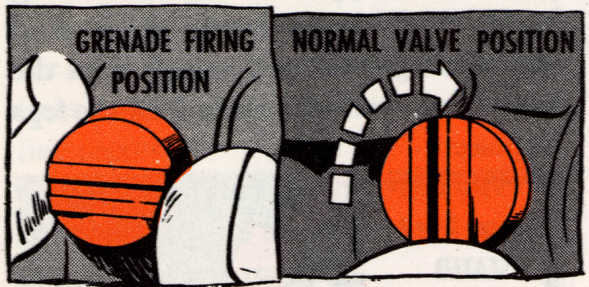
To complete the firing circuit, aline the key and keyway and push the plug into place.

To make the launcher safe, just remove the plug by pulling it straight out.



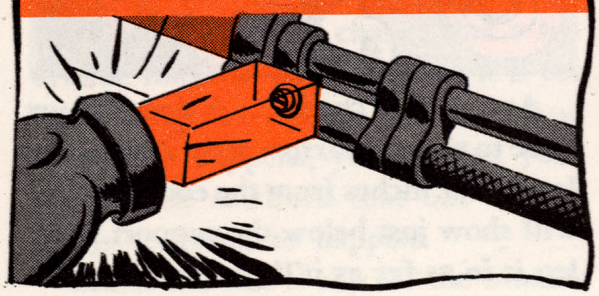
It's been said before, but it's worth a repeat: Keep the spindle valve on your M14 rifle loose as a goose when using the M76 grenade launcher.

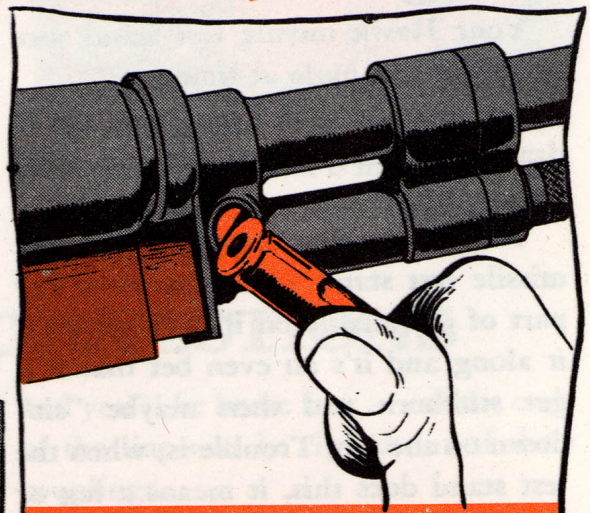
You should be able to rotate the valve easy from **vertical to horizontal** with a little thumb-and-finger pressure.



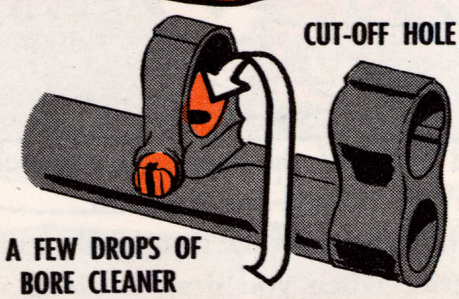
The valve should go in far enough to let the roll pin clear the grooves on the opposite side of the gas chamber. If it won't, odds are carbon's built up between the valve and the gas cylinder.

Usually, putting a hunk of wood or a brass drift against it and tapping it a few times will unfreeze it — without hurting slotted head.





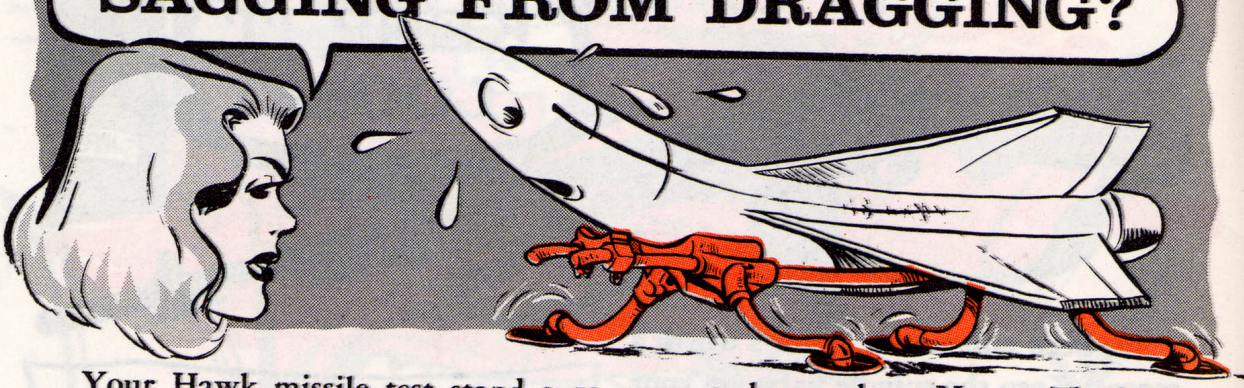
If you still have a hard time turning the valve by finger . . . try using a coin, a cartridge rim or your M14 rifle combination tool.



If the valve won't return to the locked position after compression, try putting a few drops of bore cleaner in the spindle valve **cut-off hole.** Then work the spindle back and forth a couple times . . . and wipe off any extra bore cleaner.

If it still won't work right after all this, turn your M14 in to your support unit for a looksee.

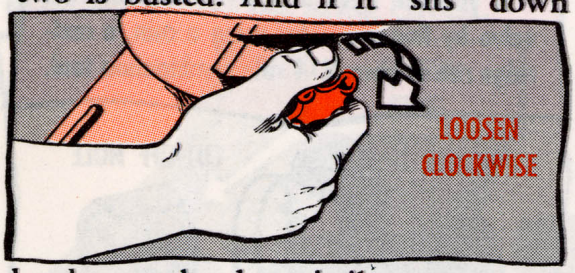
SAGGING FROM DRAGGING?



Your Hawk missile test stand sure can act like a mule at times.

You take hold of a mule and try to drag it . . . and like as not it'll settle to the ground.

The same thing happens with the missile test stand when you have any part of the missile on it. Try and pull it along and it's an even bet that it'll get stubborn and then maybe "sit" down on the job. Trouble is, when the test stand does this, it means a leg or two is busted. And if it "sits" down



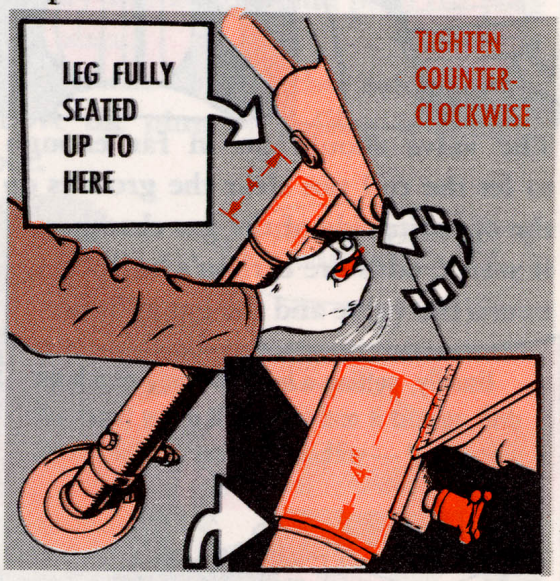
hard enough, the missile components won't be helped one little bit.

The chances of the test stand coming to grief when you drag it along are even greater if the legs aren't fully seated. And because the locking knobs for the legs lock and unlock backward according to the normal scheme of things, some guys get started on the wrong foot when they go to insert the legs in the test stand supports.

What they do is turn the knobs counterclockwise—thinking this is the way to loosen them. Not so. That's the direction for tightening.

It turns out that when you tighten the supports before the legs are in them, you can't get the legs all the way in. This sets up the legs for more strain than they should be under.

So remember: Before you insert the legs in the supports, turn the locking knobs clockwise to loosen them. And once the legs are fully seated, turn the knobs counterclockwise to lock the legs in place.



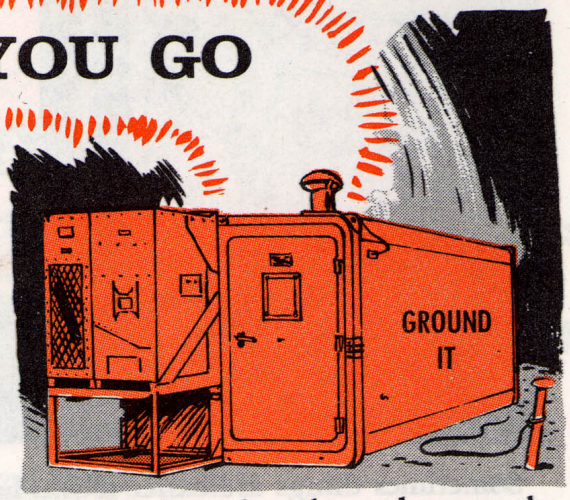
As a double check . . . it doesn't hurt none to paint a narrow strip around the leg—four inches from the end. The line will show just below the support if the leg is in as far as it'll go.

AWAY YOU GO

It's one thing to cool your equipment . . . and it's another thing for you, personally, to get stone cold.

The air conditioner for your Hawk battery control center can do both for you, right enough. The air conditioner is built for cooling the BCC equipment. And it does.

But when you run it without the BCC being grounded, you invite a jolt from upwards of 240 volts that could be making the rounds of the air conditioner and BCC frame.



So play it real cool—make sure the BCC grounding stake is installed before you apply power to the air conditioner or BCC.

IT TAKES CONNECTIONS

And without connections—like at the ends of your Hawk loader hydraulic lines—the loader shows up on a deadline report.

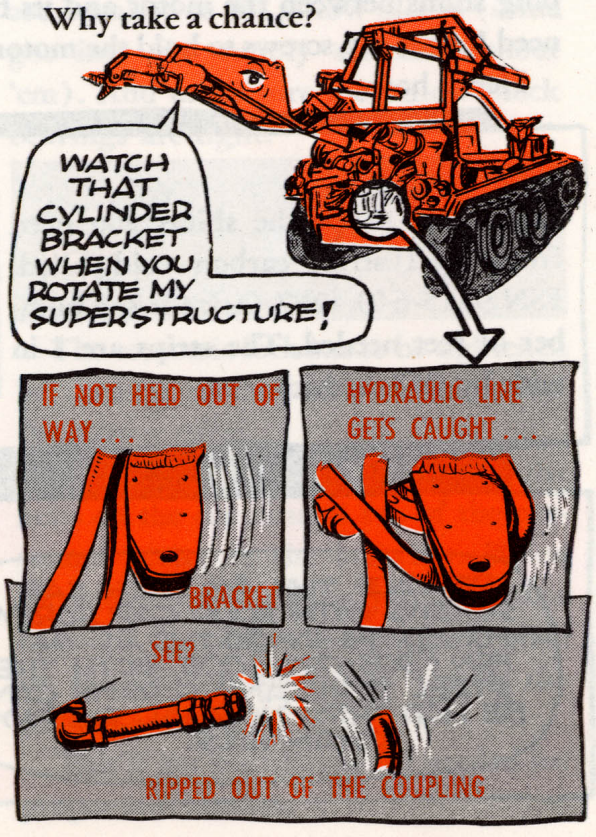
Sure . . . you always remember to connect the lines after they've been uncoupled for any reason.

It's when the lines are connected and you go to rotate the superstructure that you're leaving yourself wide open for a bucketful of woes if you don't have your "thinking gear" in operation. The culprit in the situation is the azimuth cylinder bracket on the main support.

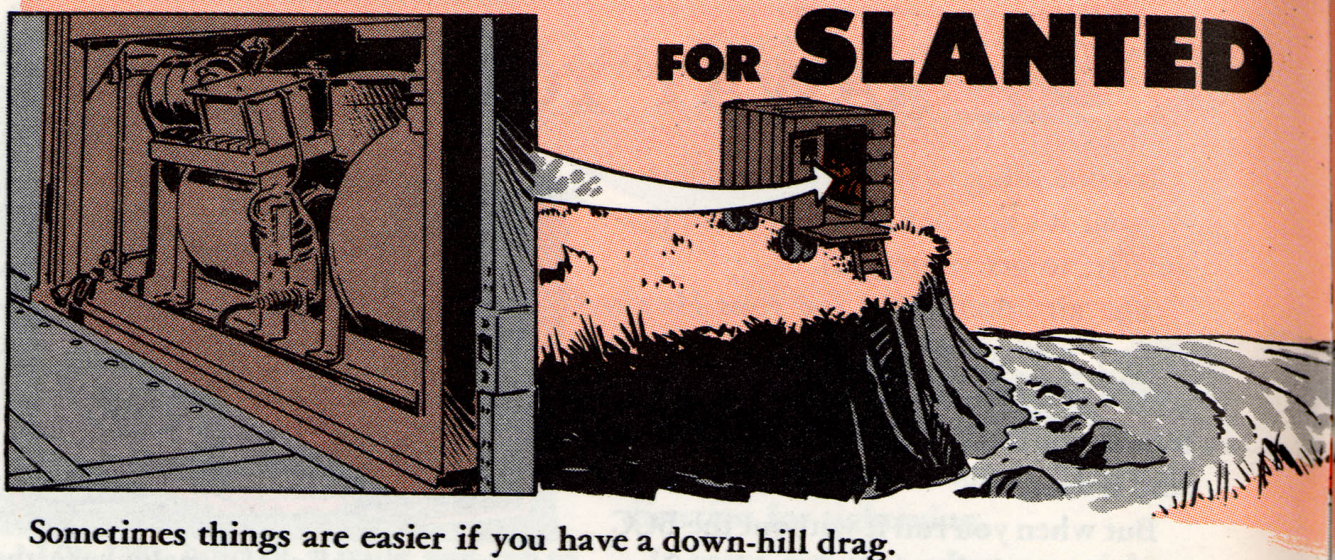
As the bracket goes around with the support when the superstructure is rotated, there's a good chance that a hydraulic line will get caught on it if the line's not held out of the way. And when this happens, you can bet your last double sawbuck that one of two things're going to happen.

Either the line'll slip off the bracket and you'll be home free . . . or the ends of the line will be ripped out of their couplings.

Why take a chance?



FOR SLANTED



Sometimes things are easier if you have a down-hill drag.

But that's not the way 'tis when you're adjusting the blower belts on your Nike equipment cooling system centrifugal fan, HD-167 (XN-1)/M.

Your slotted base plate for the blower drive electric motor was meant to let you slide the motor and adjust the belts like it says in para 45b of TM 9-1430-253-20/1 (Oct 59) and para 50b of TM 9-1430-253-20/2 (Feb 61).

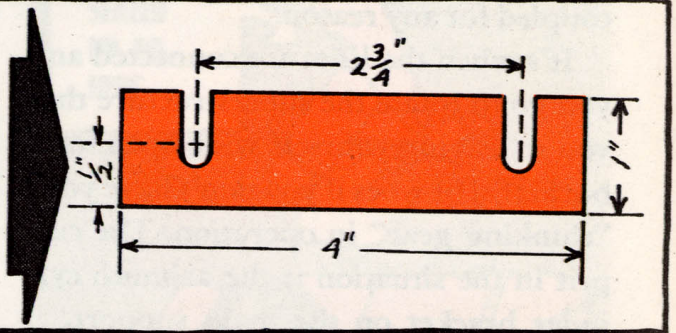
But this is one down-hill drag that's likely to get you no place.

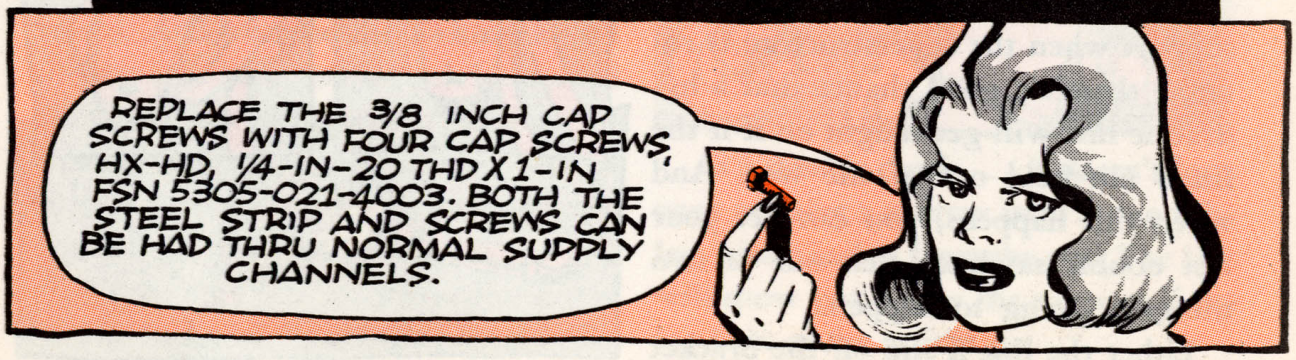
With the motor installed on this diagonal down-hill cant, sliding the base plate may get you only a shift with no belt adjustment.

When this happens, you can get the belts in adjustment with no sweat by slipping shims between the motor and its base plate. It's likely, tho, that you'll also need longer cap screws to hold the motor in place.

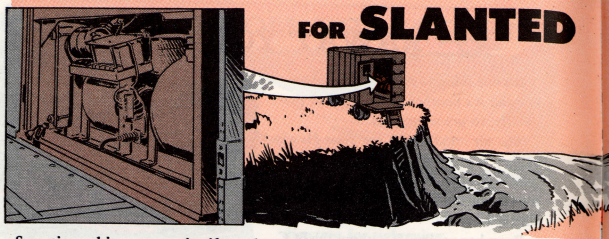
Here's how:

Cut and shape the shims you need from Steel strip, carbon cold-rolled, FSN 9515-640-4287. Ask for the number of feet needed. The strips are 1-in wide by .063-in thick.





FOR SLANTED SLOTS



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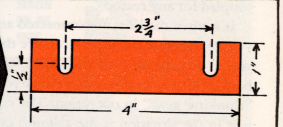
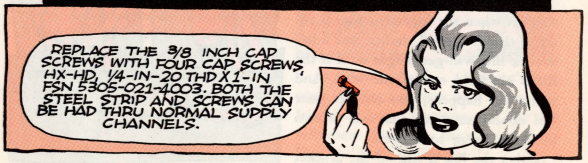
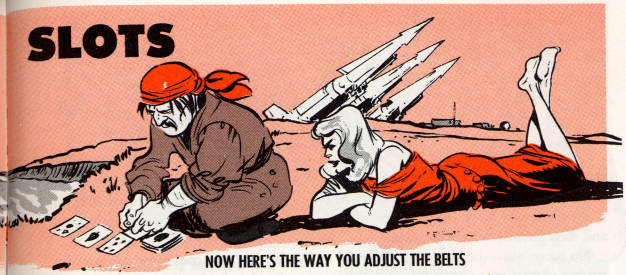


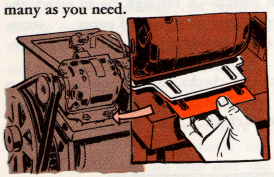




NOW HERE'S THE WAY YOU ADJUST THE BELTS

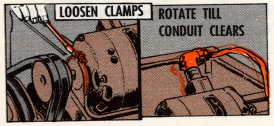
When you take out the old cap screws, hold on to the lock washers and flat washers.

Slip shims between the motor and base plate to give the motor the "lift" needed for proper belt tension. Use as many as you need.



Attach the motor to the base with the four new cap screws. Here's where you use the washers you saved from the old screws. Cap screws at the rear can be installed easier if you slot the heads so you can install 'em with a screwdriver.

If the conduit elbow on the motor strikes the top panel, loosen the clamps at the ends of the motor and rotate it till the conduit clears the top of the panel. Then tighten the clamps.



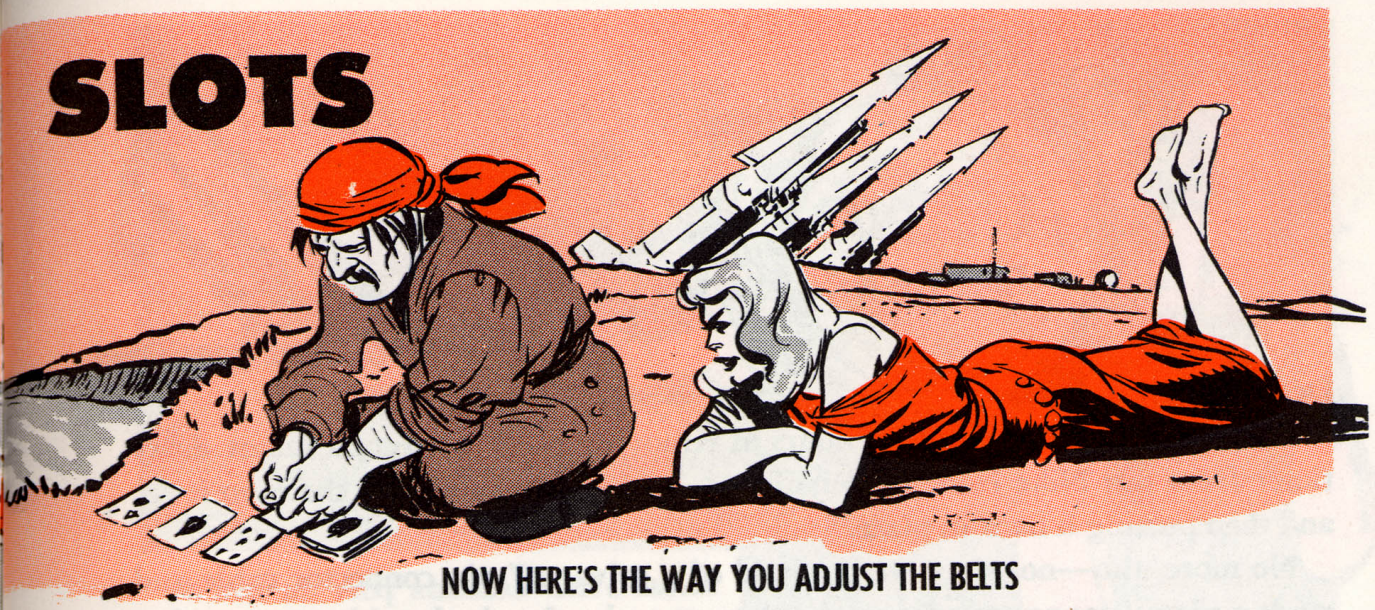
Give the screws holding the motor to the base a final check for tightness —making sure the belts now have the right tension.

While you're about it, check the blower shaft to see if rubber cushions are installed in the pillow blocks (some got into the supply system without 'em). And make sure the pillow block bearings are tight.

The eccentric lock has to be tightened by turning in the same direction that the blower turns.

You also can use shims to adjust the belts on the centrifugal fan of the personnel heater in the launcher. When the belts need adjusting, just slip shims between the motor and the base plate on the side of the motor nearest the blower assembly.

This'll get the lift and tilt needed for proper belt tension.



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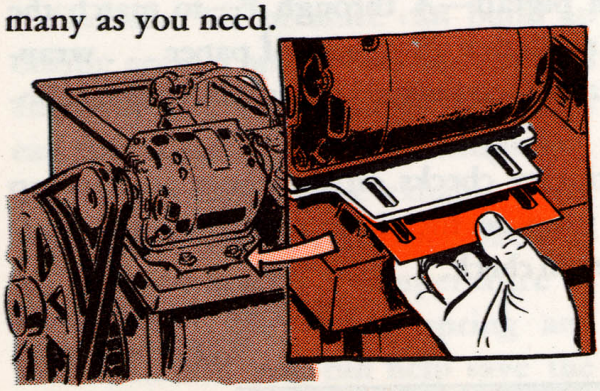

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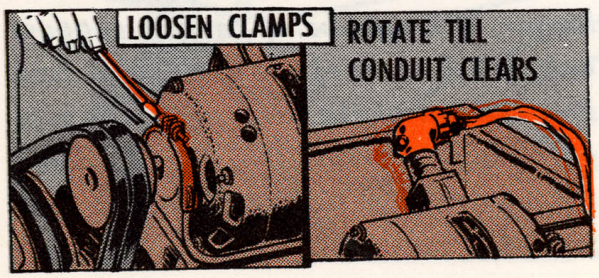

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This'll get the lift and tilt needed for proper belt tension.

Dear Editor,

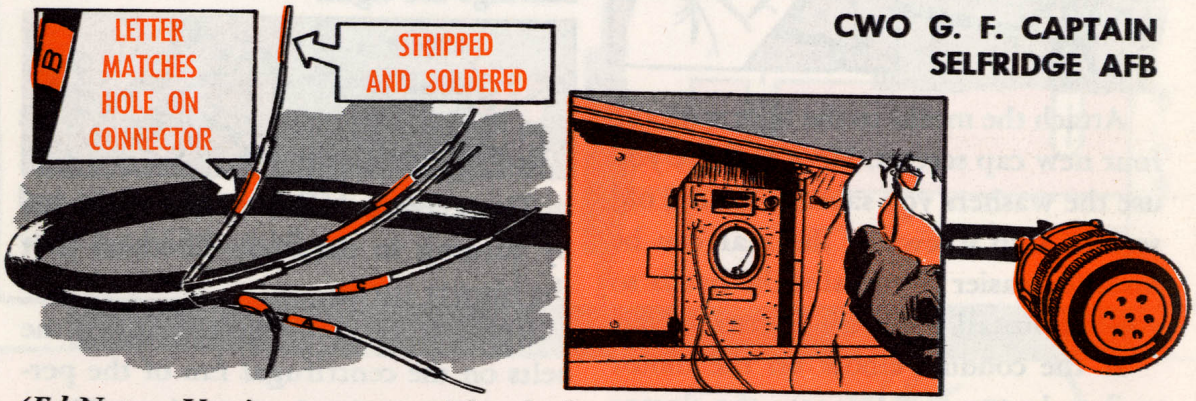
We used to spend a couple of hours in removing the 9-¼ second motor delay timer from our Nike-Hercules missiles . . . making the quarterly check on it . . . and then putting it back in place.

No more, tho—not since we got hold of a salvage 7-pin connector cable and made a pigtail connector adapter that lets us make the check without removing the timer from the bird.

The first thing we did was remove the male connector from the end of each cable. Next we stripped about an inch from the end of each conductor . . . and then twisted and soldered the bare wiring to give us our pigtails.

The last thing to do is trace each conductor from the female connector through to each pigtail . . . and then mark each pigtail—A through F—to match the holes in the female connector. Writing the letter on a piece of paper . . . wrapping the paper around each pigtail . . . and then fastening it in place with cellophane tape will do the trick.

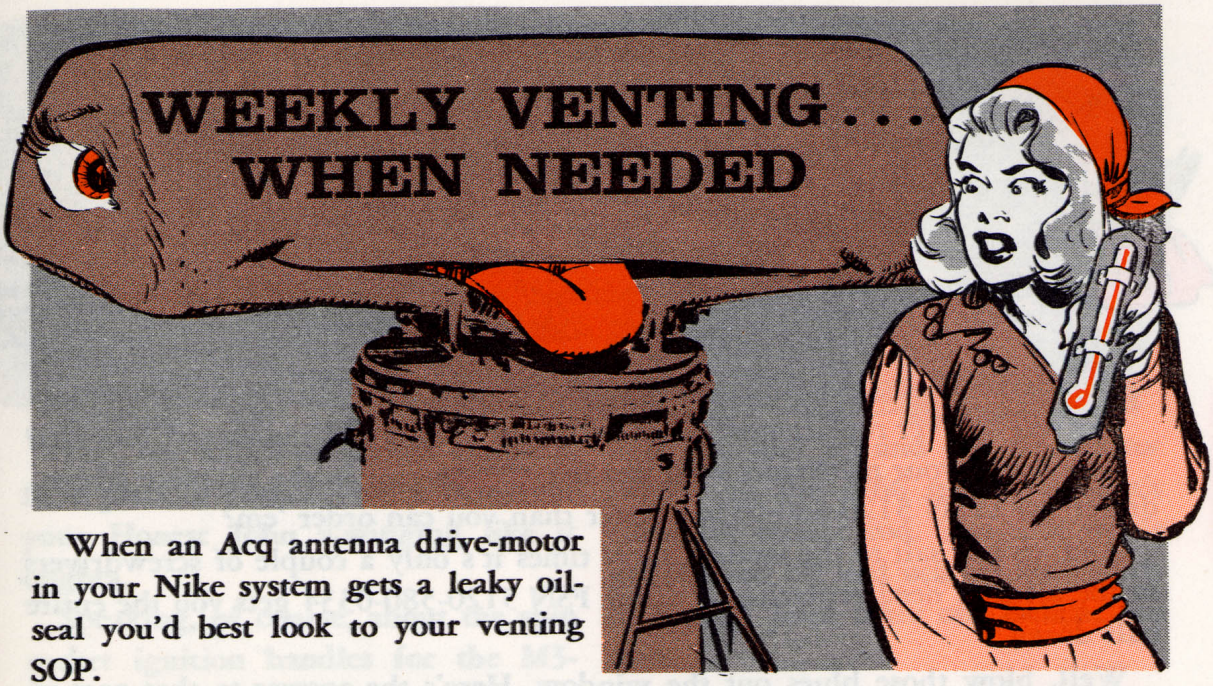
All you have to do to make your continuity checks on the timer is hook up the female connector to the J179 male plug on the timer and touch the multimeter test leads to the pigtails used for each check.



CWO G. F. CAPTAIN
SELFRIDGE AFB

(Ed Note—You've come up with a deal similar to that worked out by other outfits. You can save even more time by taking out the timer and leaving it out—once it goes bad. After all, it's only used for low altitude firing missions—something the Herc doesn't have any longer. It would be up to your support unit to take care of the cables that feed into and out of the timer. Give the support people a break, tho, by not calling them to remove the timer until it does go bad.)

WEEKLY VENTING . . . WHEN NEEDED



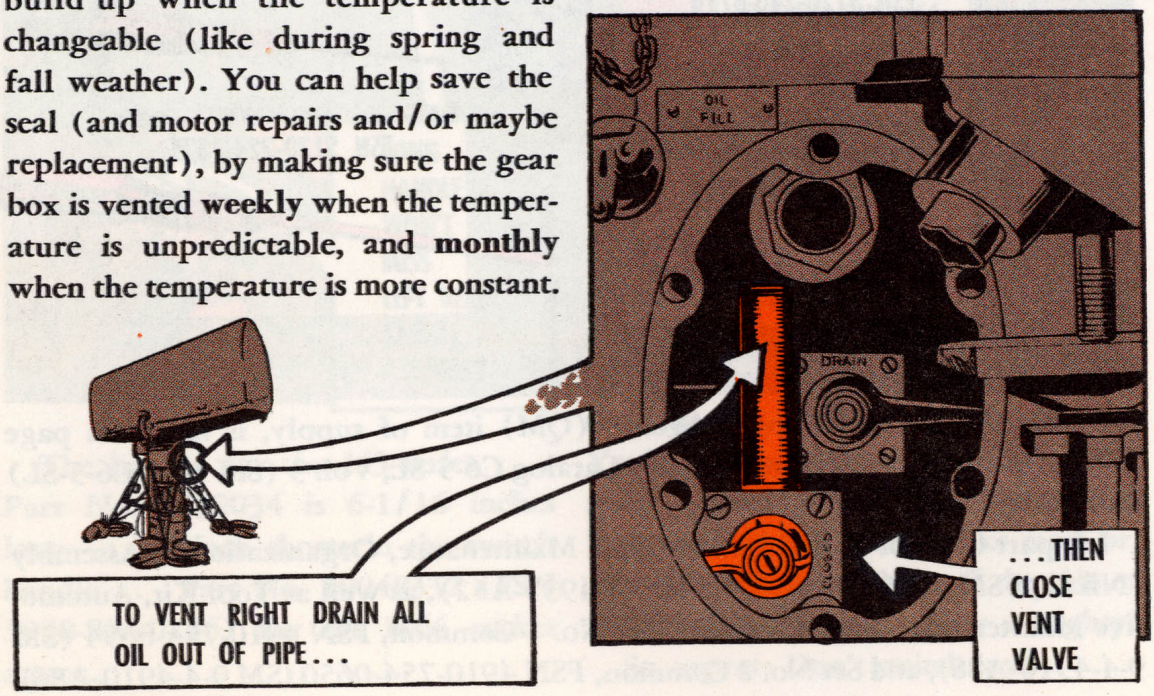
When an Acq antenna drive-motor in your Nike system gets a leaky oil-seal you'd best look to your venting SOP.

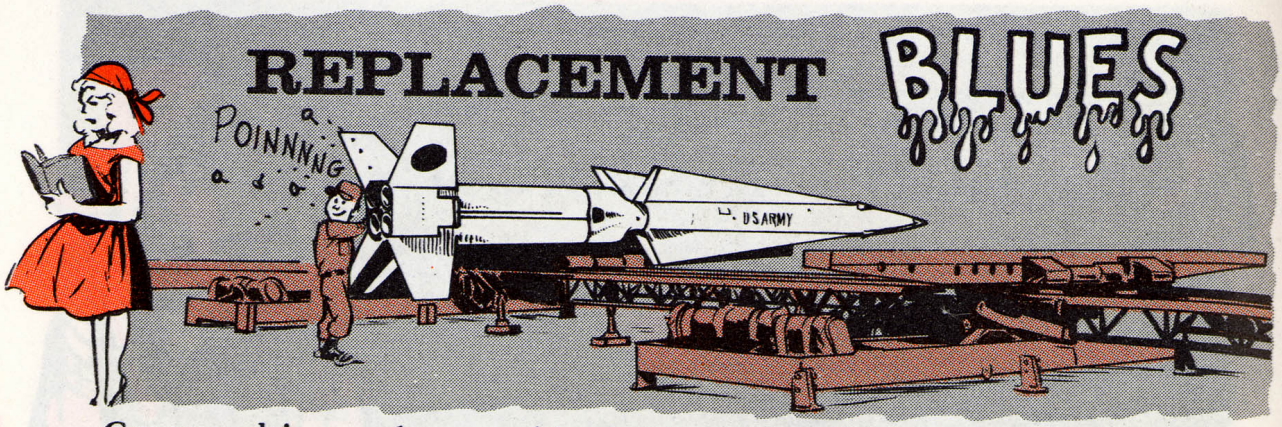
Could be you're not venting the gear box correctly, or maybe not often enough.

Excessive air pressure can build up during normal operations, and the oil's easy way out is to force the seal. You can spot a leaky seal easy enough . . . oil'll get slung out the exhaust ports.

Excessive pressure is more likely to build up when the temperature is changeable (like during spring and fall weather). You can help save the seal (and motor repairs and/or maybe replacement), by making sure the gear box is vented weekly when the temperature is unpredictable, and monthly when the temperature is more constant.

And, Note: When you open the air-vent valve there may be some oil in the vent pipe . . . and it may woosh out. Well, don't panic and close the air-vent valve too quickly. Let the oil flow. To properly vent the drive-motor gear box you have to let all the oil drain out of the pipe . . . before you close the vent valve.





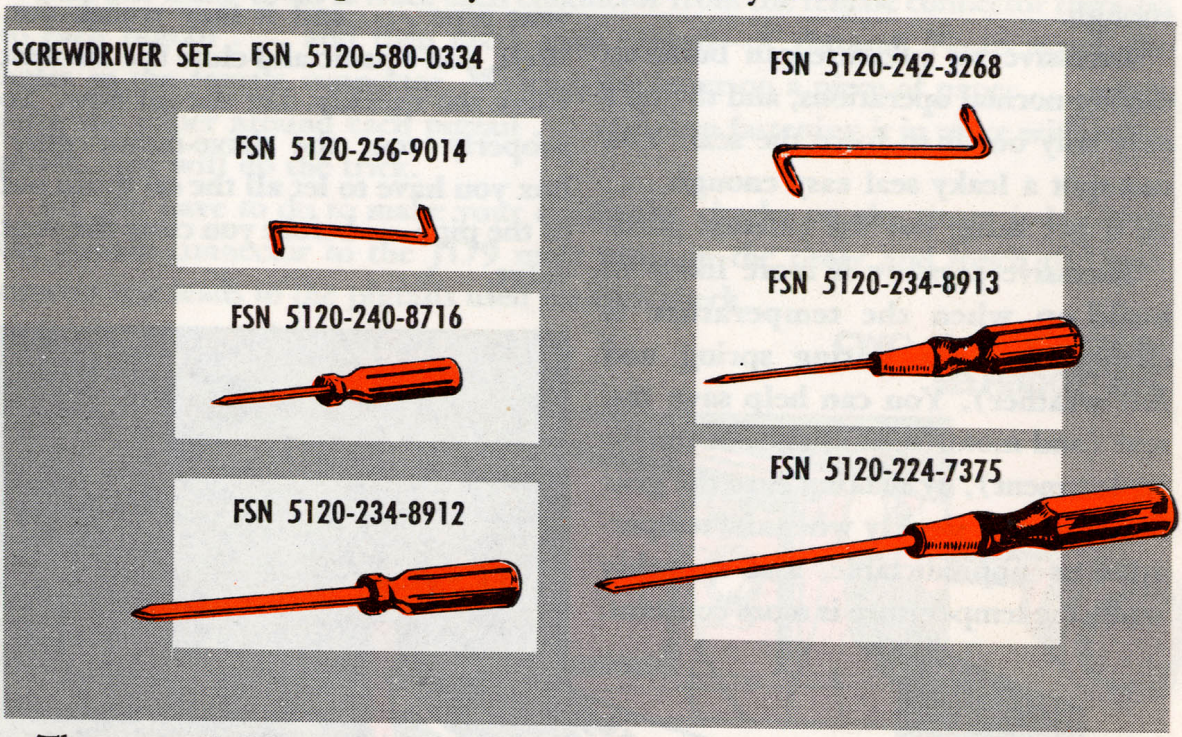
Got screwdriver replacement blues with your missile and automotive tool kits?

Like man—your mechanics wear out the tips in the six-piece screwdriver set (FSN 5120-580-0334) faster than you can order 'em?

And, to add salt to the wound, most times it's only a couple of screwdrivers in the set that need replacing . . . but FSN 5120-580-0334 gets you the entire half dozen.

Well, blow those blues out the window. Here's the answer to that part of your problem—separate FSN's for each screwdriver in the set.

Use this info and replace only the screwdrivers you need.



The set, a Defense Supply Agency (QM) item of supply, is listed on page 1169 of the new-type Federal Supply Catalog C6-5-SL, Vol. 3 (SM 10-1-C6-5-SL) dated May 1961.

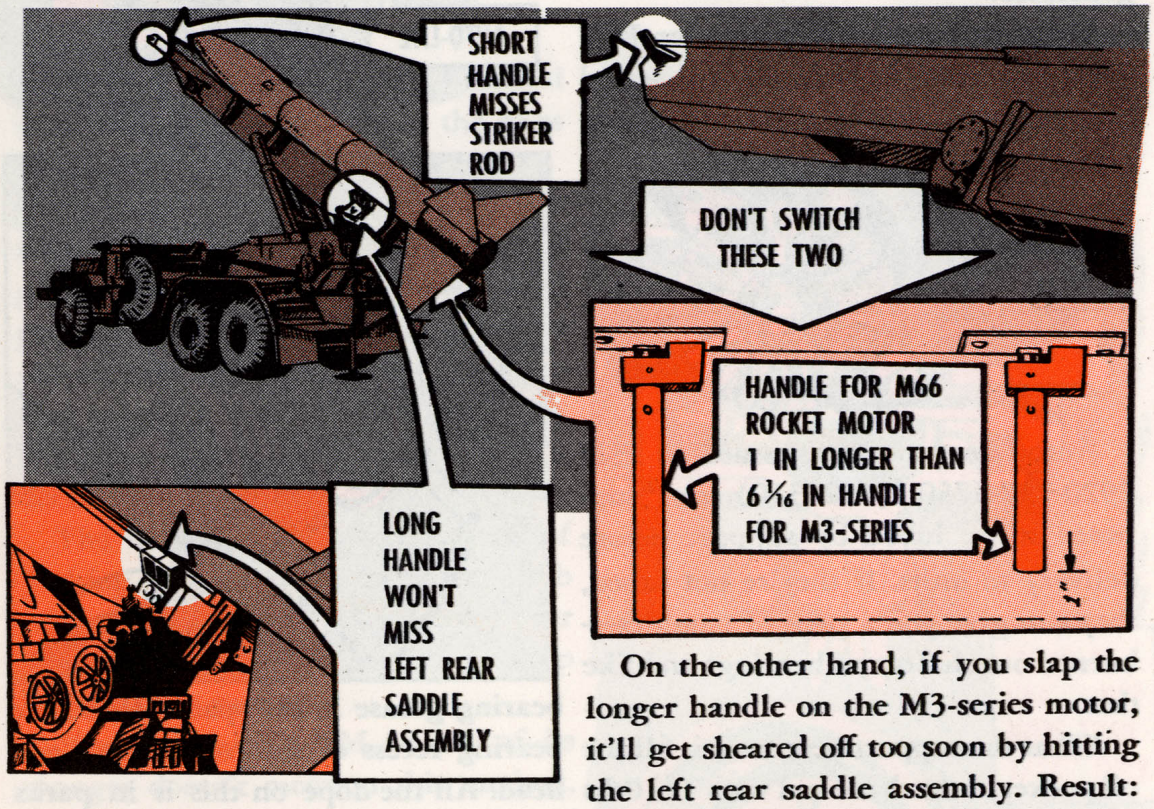
It's part of Tool Kit, Guided Missile Maintenance, Organizational, Assembly (Nike), FSN 4935-695-0137 (SM 9-4-4935-A42), as well as Tool Kit, Automotive Maintenance, Organizational, Set No. 1 Common, FSN 4910-754-0654 (SM 9-4-4910-A88), and Set No. 2 Common, FSN 4910-754-0650 (SM 9-4-4910-A86).

NO SWITCH-ER-OO, OK?

Yep, one knock-off switch handle'll fit in place of t'other—but it won't get your Honest John a-winging like it oughta.

Speaking, of course, about the spin rocket ignition handles for the M3-series and M66 rocket motors.

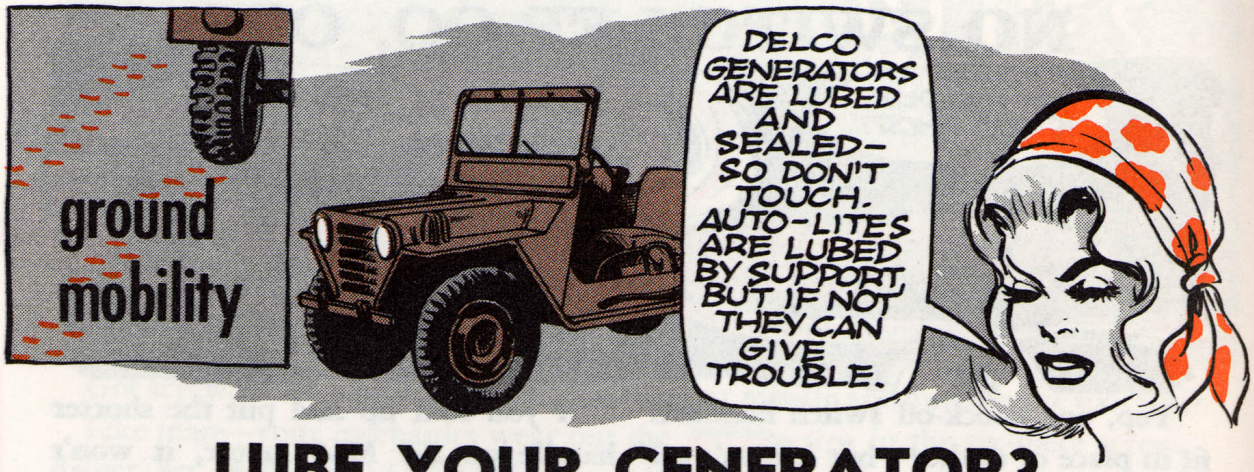
If you foul up and put the shorter handle on the M66 motor, it won't reach the striker rod. So-o-o, it won't get sheared off and actuate the switch as Honest John takes off. Result: No spin.



The handle for the M3-series . . . Part No. 8032034 is 6-1/16 inches long—a big inch shorter'n the switch handle . . . Part No. 10048332 (FSN 5930-806-0146) for the M66 rocket motor.

On the other hand, if you slap the longer handle on the M3-series motor, it'll get sheared off too soon by hitting the left rear saddle assembly. Result: You'll get premature ignition of the spin rockets. Which could mean, at best, the rocket'll wobble like mad, or, at worst, it'll scoot right off the side of the launcher and . . . phew a-mighty!

So, repeat: Don't switch 'em.

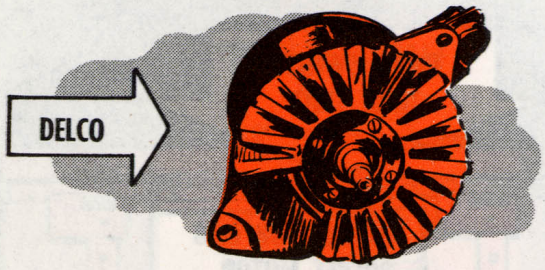


LUBE YOUR GENERATOR?

Does the generator on your tactical wheeled vehicle get lubed or not?

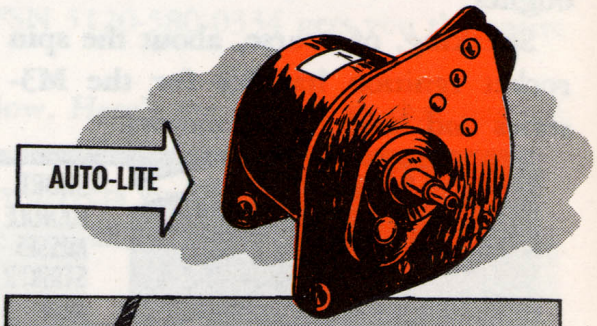
It all depends on the make—of the generator.

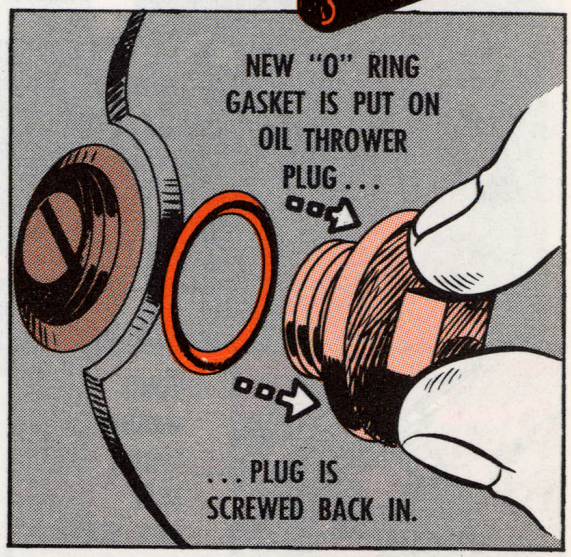
Delco generators issued under FSN 2920-735-5736 (7355736) are sealed and prelubed so you don't touch 'em.



Auto-Lite generators issued as FSN 2920-737-4750 (7524310) are supposed to be lubed by support before delivery to units. If they're not lubed, they can give you a peck of troubles—burned out shafts and bearings and like that.

What the support people do is fill the oil pocket in the drive end with 4/10ths of an ounce (1 tablespoonful) of OE 10 engine oil (MIL-0-2104). They also put a new "O" ring gasket on the oil thrower plug when they screw it back in. Another thing they do is put half an ounce of high temperature ball bearing grease in the space behind the bearing recess of the commutator end head. All the dope on this is in paras 29 and 30 of TM 9-2920-209-34.



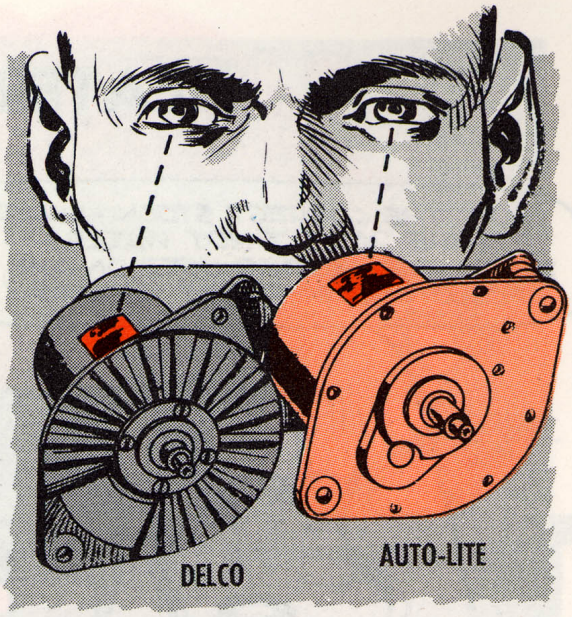


If you think your Auto-Lite generator can't cut the mustard like it ought to, have your support check the generator oil and grease.

This applies to M-series wheeled

vehicles of all sizes from the quarter-tons to the 10-tonners. It's also true for the Loader, Transporter, Self-Propelled, Hawk Missile: XM502E2.

One other thing that might throw you . . . Some of the earlier supply manuals list only one number, FSN 2920-737-4750 (7524310), under which either a Delco or an Auto-Lite generator could be issued. If you're in doubt which generator you have, just eyeball the generator data plates. They'll clue you in.



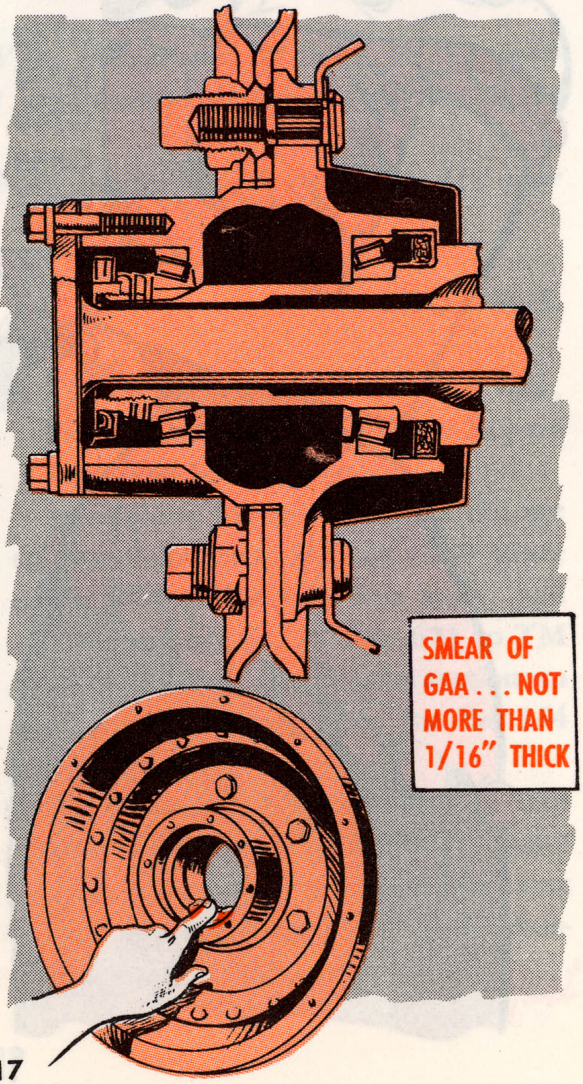
RUB-A-DUB HUB

Leaking wheel hubs in tactical wheeled vehicles could mean the hubs are packed with too much grease.

Ask any old timer and he'll tell you there's been a change in the method of packing grease in wheel hubs. When packing wheel bearings with GAA, the old method of packing the hub full is now taboo. A full hub of grease only brings on leaks . . . and leaks are murder on brake systems.

The new and approved method of packing wheel hubs is to rub the hub with a thin smear of GAA . . . not over 1/16 inch thick. Just enough to keep the hub from rusting.

If your vehicle's TM or any of its changes doesn't mention this method, then go by TM 9-273, "Lubrication of Ordnance Materiel," (Jan 62). It covers many details of lubrication not found in specific vehicle publications. Get a copy and keep it near your grease rack.

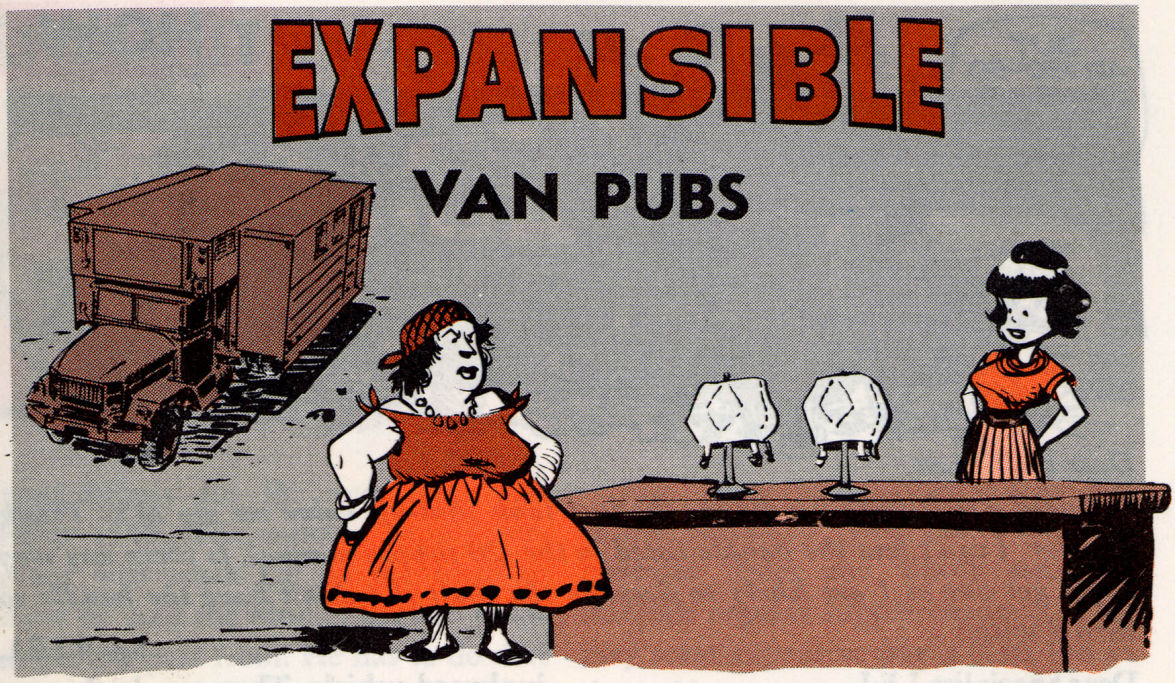


HEATER MOTOR

The FSN used to be 2540-318-0155; now it's FSN 2540-020-8591. This FSN is for the heater assembly only and not for the whole kit that's listed in the TB 9-2855 series for each vehicle. In other words, it's for a replacement heater.

Before you start asking your support for a replacement heater assembly it may be a good idea to look over your heater and see if the breakdown is due to a burned out motor. If that's the case, then no use asking for a complete heater assembly—ask your support to get a replacement motor that comes under FSN 6105-512-9225. It costs less.

EXPANSIBLE VAN PUBS



Dear Half-Mast,

We've recently been issued Truck, Van, Expansible, 2½-ton, M292 with Body, Van, M4. Our problem . . . what organizational publications cover the M4 van body that's on this truck?

I can't find anything about the van body in either DA Pamphlet 310-4 or the basic vehicle TM on the van body.

Are there any pubs on the van?

CWO J. W. S.

Dear Mister J. W. S.,

Yes there are . . . but you have to go all around the barn and come in through the back door to find them.

To start off you'll have to keep in mind that the van body is mountable on different types of chassis; in this case it's a truck and semitrailer.

The publications that belong to the M4 van body installed on the M46 truck chassis which makes up the Truck, Van, Expansible, 2½-ton, M292 are—

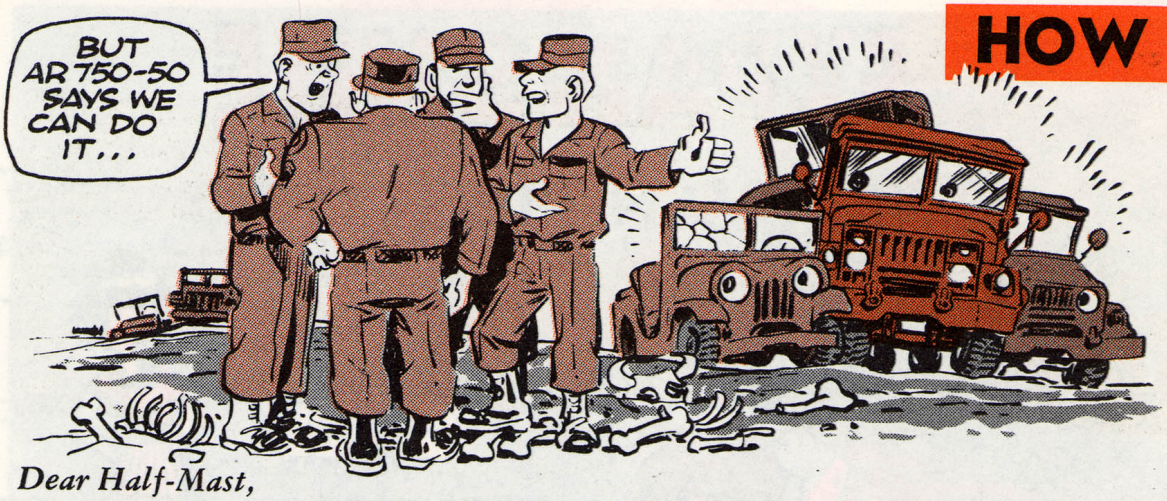
TB 9-2320-209-12/1 (21 Jan 59), Operation and Organizational Maintenance Instructions.

TM 9-2320-209-35P (4 Oct 62), Field and Depot Maintenance Repair Parts and Special Tools.

Since there has never been a change to cover the basic M292's -20P spare parts manual for this van body, you can use Change 1 (25 Apr 62) to TM 9-2330-238-24P to get information on 2nd echelon repair parts for the M4 van body.

This Change 1 is for the M4 van body mounted on the M295A1 trailer chassis. The repair parts are the same for the van body regardless of the chassis on which it's mounted.

Half-Mast



HOW TO

Dear Half-Mast,

I need a switching handle for the fuel tank shut-off valve on my M52 Truck Tractor. I can't find the handle listed in the -20 supply manual. Is there any way I can get one as I am likely to damage the shaft if I don't have the handle to turn it with?

Sp–4 J.E.L.

Dear Specialist J.E.L.,

You're right, they don't list it as a separate item in the supply manual, so you can't order it. This is because they figured it was a non-wearing part that would last the life of the vehicle.

The best bet would be to have your Ord support cannibalize one from some junkyard vehicle. They can do that under AR 750-50 (6 Mar 59) and Change 2 (Oct 60) which says that parts and assemblies can be cannibalized provided you can't order them through normal supply channels and provided you need them.

You fit both qualifications, so ask

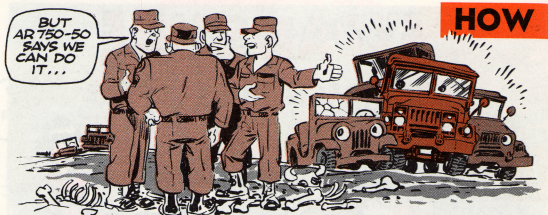
CANVAS

Maybe it isn't just nit picking.

But it's just as easy to put the carriage bolts in the right way. And having 'em in the right way sure saves wear and tear—mostly tear—on the canvas covering such vehicles as the M37 ¾-ton cargo truck and various trailers.

The bolts can be inserted in the top bow assemblies and stakes with their heads on the outside or inside of the vehicle. When the heads're on the inside, the ends of the bolts stick out—in just the right spot for the canvas to rub against them. And it doesn't take much chafing to work a rip into the canvas.

So look over your vehicles . . . and make sure the heads of the bolts face the outside at both the front and rear. It's worth the few minutes it takes to set things right.



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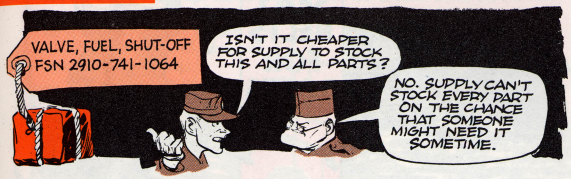
You fit both qualifications, so ask your supply for the item on a DA Form 1546. The support supply sergeant will mark CP on the form to show he used the cannibalization point to get the part from. He has to do that so the rear echelon supply boys can keep their records straight.

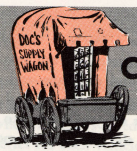
Getting parts from the "boneyard" has been done for years but AR 750-50 gives you a way to do it legal like. It can be a big help in getting parts you need but which the supply manuals don't list.



Just in case the boneyard is fresh out of the particular bone you want, you have to order the whole assembly through regular supply channels. This may seem expensive but it costs less in the end because supply can't stock every part separately just on the chance that somebody might need it sometime.

In your particular case, the whole assembly is called Valve, Fuel, Shut-Off Assembly and is listed in TM 9-2320-211-20P (May 63) as FSN 2910-741-1064.

Half-Mast



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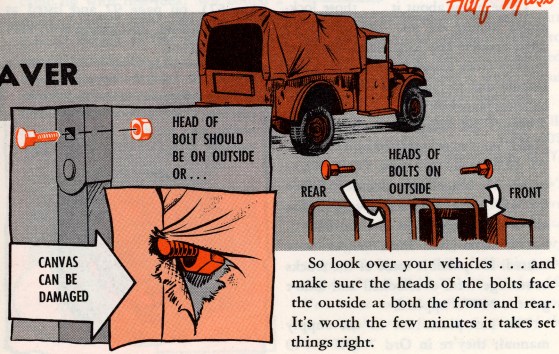

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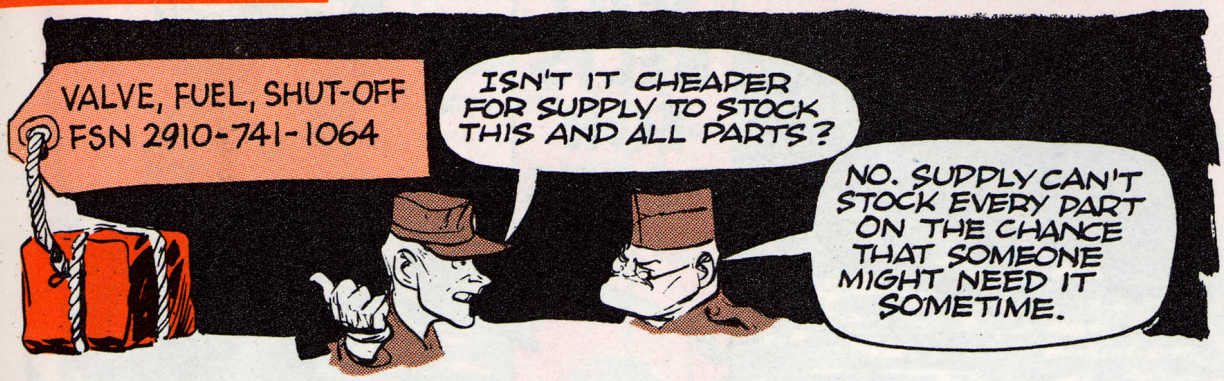
HANDLE IT



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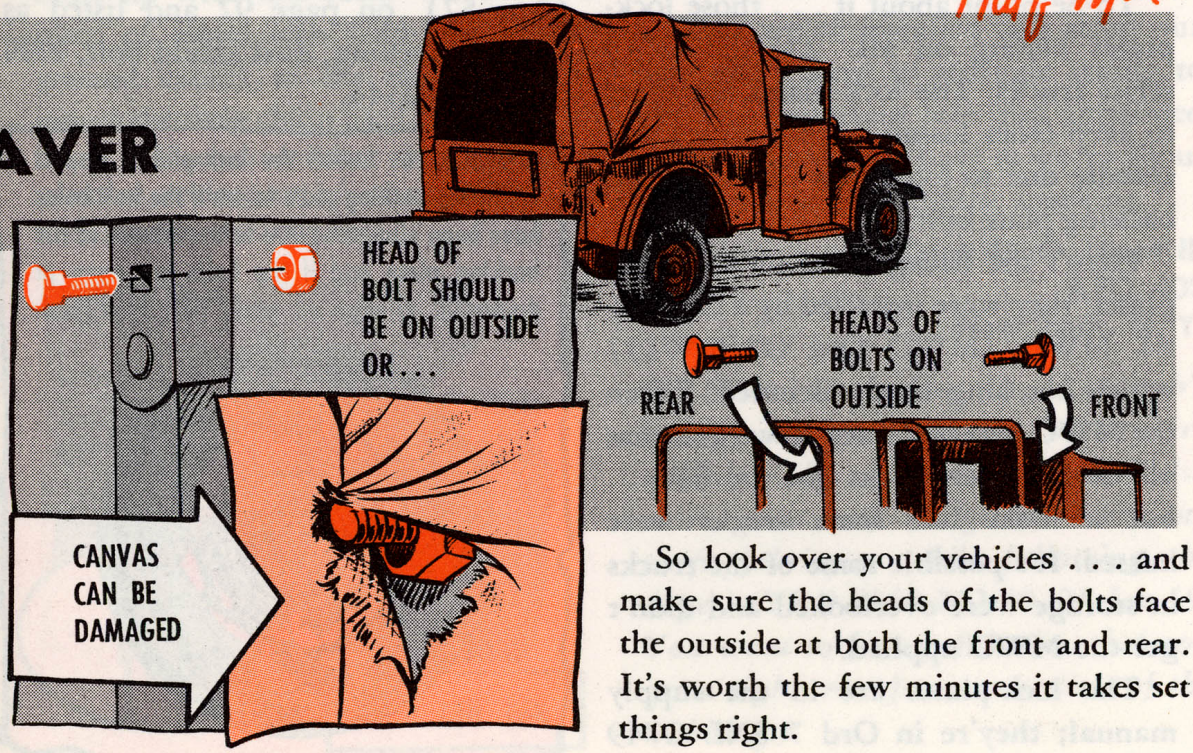

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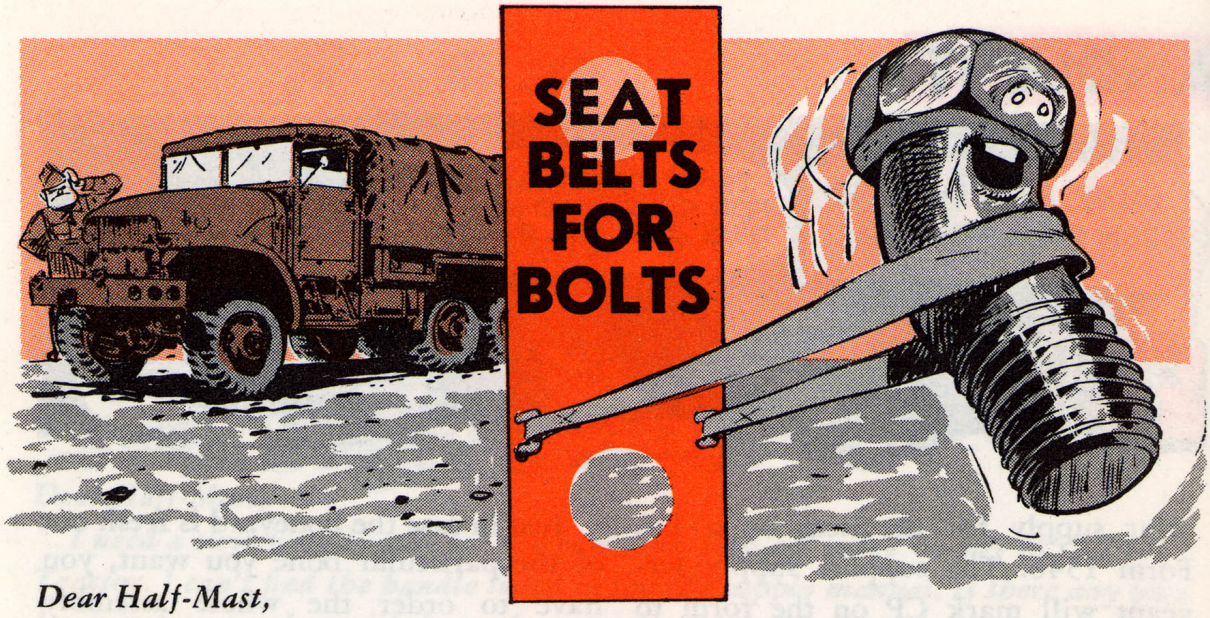


Dear Half-Mast,

We have noticed that some of our M211 and M135 2½-ton trucks have six lock-plates on each front wheel, mounted in such a way they lock the bolts in the front brake backing plate.

Our question is . . . do these lock-plates belong on all our 2 ½-ton G749 series trucks or just on certain production models?

TM 9-8024 (Oct 55) does not say or show anything about these lock-plates and we can't find them in the supply manuals either.

Any help on this topic will be appreciated.

Sp-5 K. O. L.

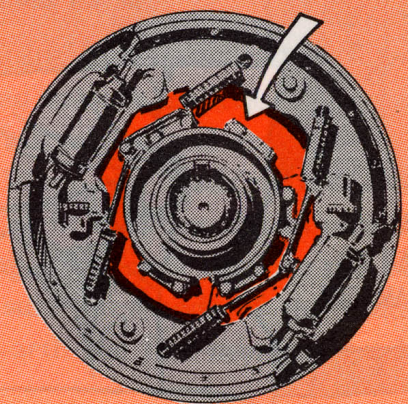
Dear Specialist K. O. L.,

To be blunt about it . . . those lock-plates belong on all 2½-ton G749 series trucks. The lock-plates are there to keep from losing a front wheel and spindle due to loose and sheared front backing plate bolts.

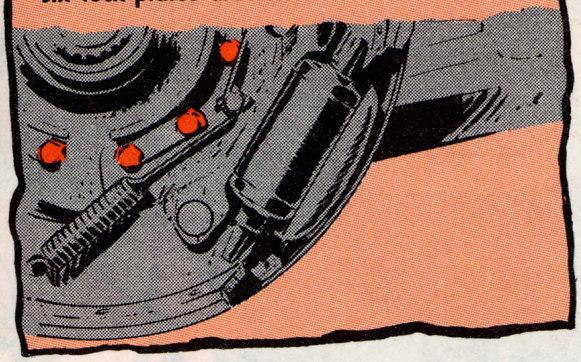
Here's the background on the lock-plates; they were installed by a NORMAL MWO (MWO Ord G749-W15) which has long been rescinded. When the MWO was rescinded it was felt that all G749 series trucks got the fix . . . but it looks like some trucks were missed. It's possible some of the trucks in storage were overlooked and didn't get the MWO applied.

The lock-plates are in the supply manual; they're in Ord 7 SNL G749 (Apr 57) on page 92 and listed as STRAP, locking, dust shield bolt, FSN 5340-696-0344.

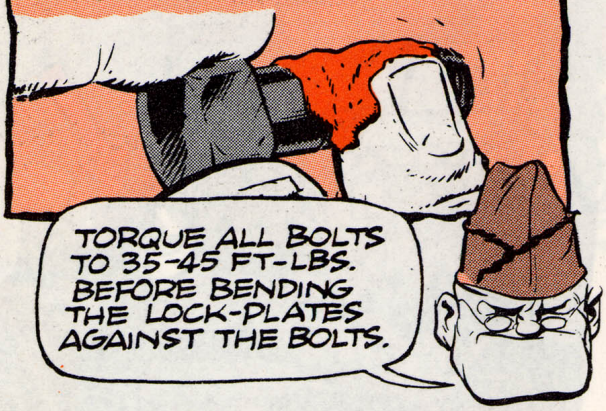
Before you install the lock-plates, inspect the brake backing plate to see if the bolt holes have been elongated due to movement of the backing plate and if the bolts are worn or damaged. Change all parts that look bad.



When you install the lock-plates, remove only two bolts at a time. Start with the pair at the 1 and 2 o'clock position and install the lock-plate—then go to the bolts at the 7 and 8 o'clock position. Criss-cross until all six lock-plates are installed.



Before putting the bolts back, smear a light coat of Gasket Cement (FSN 5330-252-3391) on the threads.



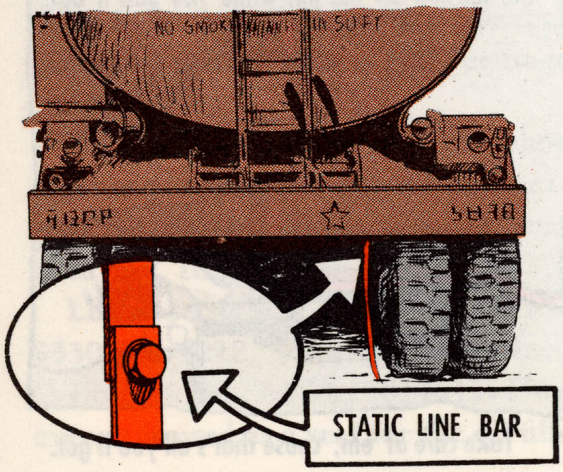
Half-Mast

BITE ON THIS!

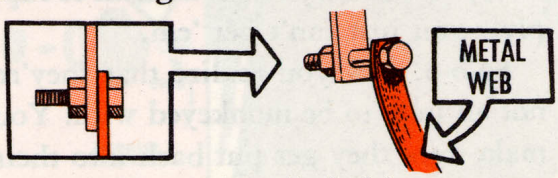
Dear Editor,

Getting a good metal-to-metal contact on the painted surface of an M131-series 5000-gal tanker that doesn't have a built-in reel is a hit-or-miss business.

To make sure there's no slip-up, we came up with this idea: We bolted a piece of metal web (old-type battery ground cable) to the static line bar where the drag chain used to hang. This strap will accommodate the grounding wire at underground storage facilities and service stations.



The strap should be at least 8 inches long so's the operator can reach it without crawling under the tanker.

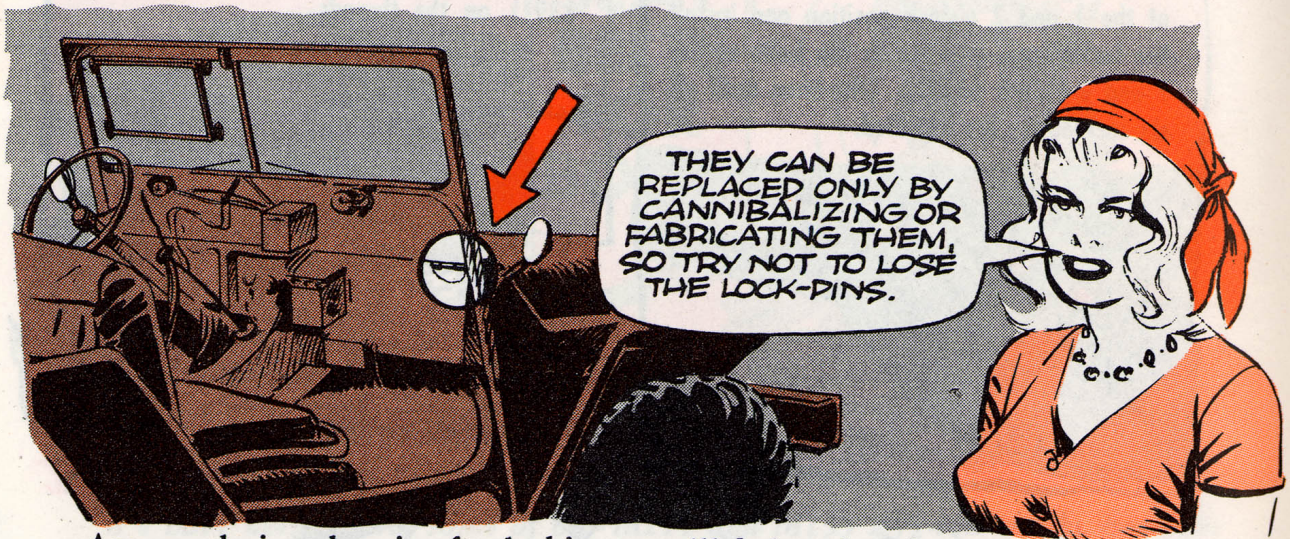


Since we've installed this strap our men don't have to struggle trying to get that important bite into unpainted metal and we don't have to worry about slippage and electrostatic sparking.

Capt W. G. Lloyd III
APO 403
New York, N. Y.

(Ed Note—Looks fine, Sir. If no web's handy, any hefty piece of copper wire will do. This strap or wire will also work great with the ground wire any outfit fabricates while following the dope in TB 9-2300-212-20, 21 Jan 59. You want to be careful, tho, that you get a tight, rust-free connection of the webbing.)

LOCK-PIN

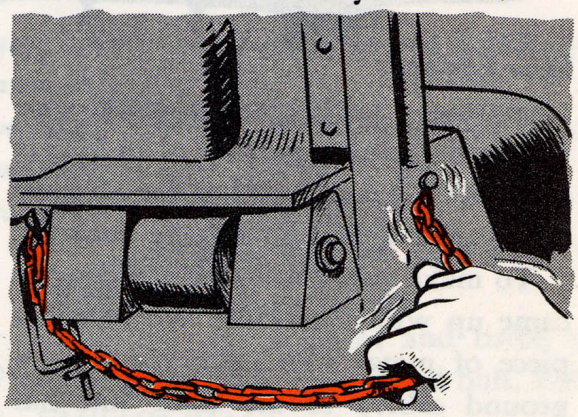


Are you losing the pins for locking the windshield in the upright position on your M151 ¼-ton?

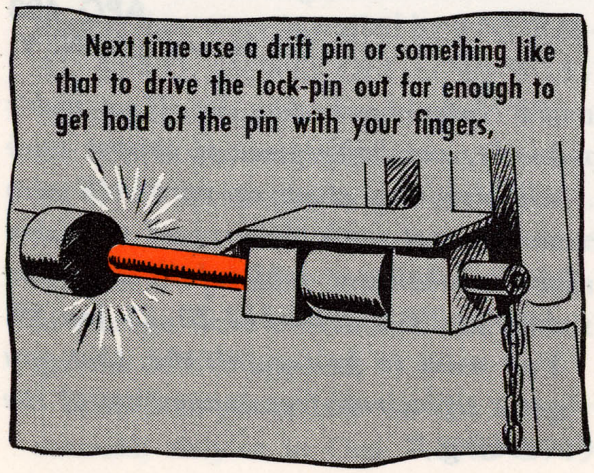
Anyway some of them are coming up missing and when you try to replace 'em, you find they're not an item of supply—you just can't get 'em.

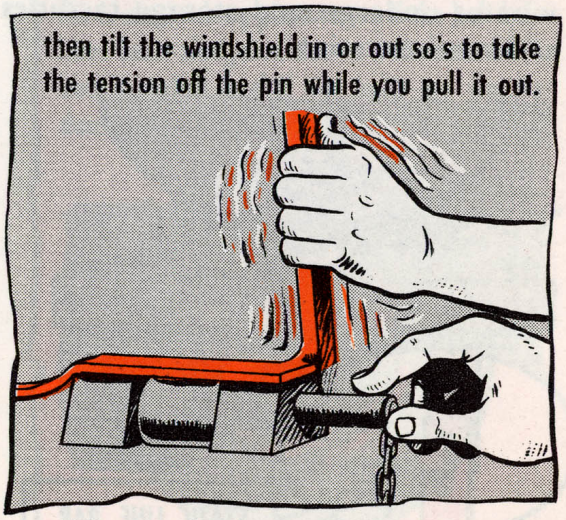
So-o-o, now you realize that they're not an item to be monkeyed with. You make sure they get put back into their hinges and safety-pinned in place, because all you can do with the lost cause is to cannibalize or fabricate 'em.

Seems some guys're trying to yank the pin outta the hinge holes by using the small chain tacked onto the pin. All you'll do here is end up with a hand full of loose chain . . . don't yank on it!

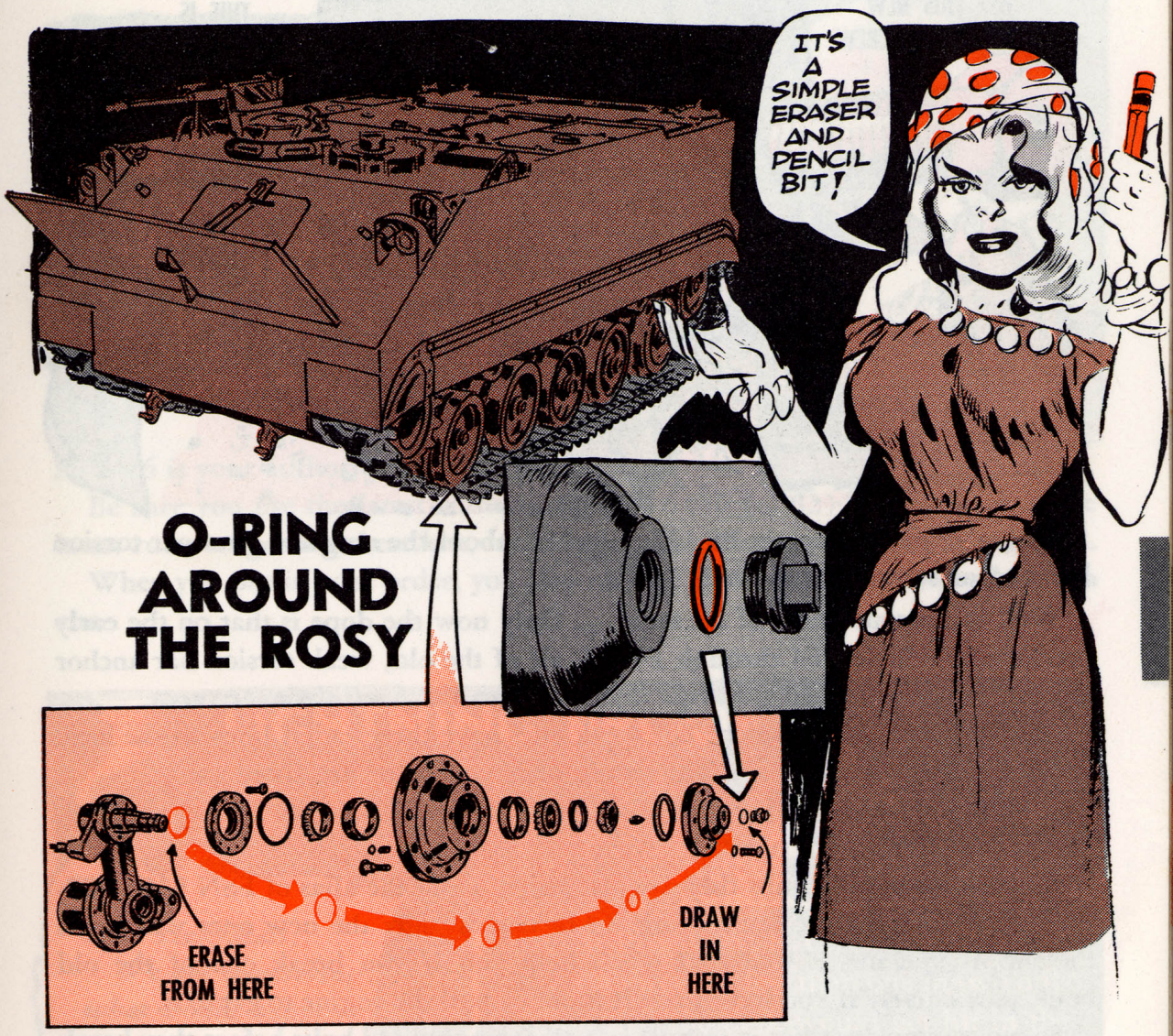


The chain serves as a means of keepin' the safety pin around.





Take care of 'em, 'cause that's all you'll get.



Does Fig. 53 in TM 9-2300-203-20P (Oct 58) have you talking to yourself?

That's the photo that shows how the parts fit in the left front road wheel assembly of your M59 armored personnel carrier.

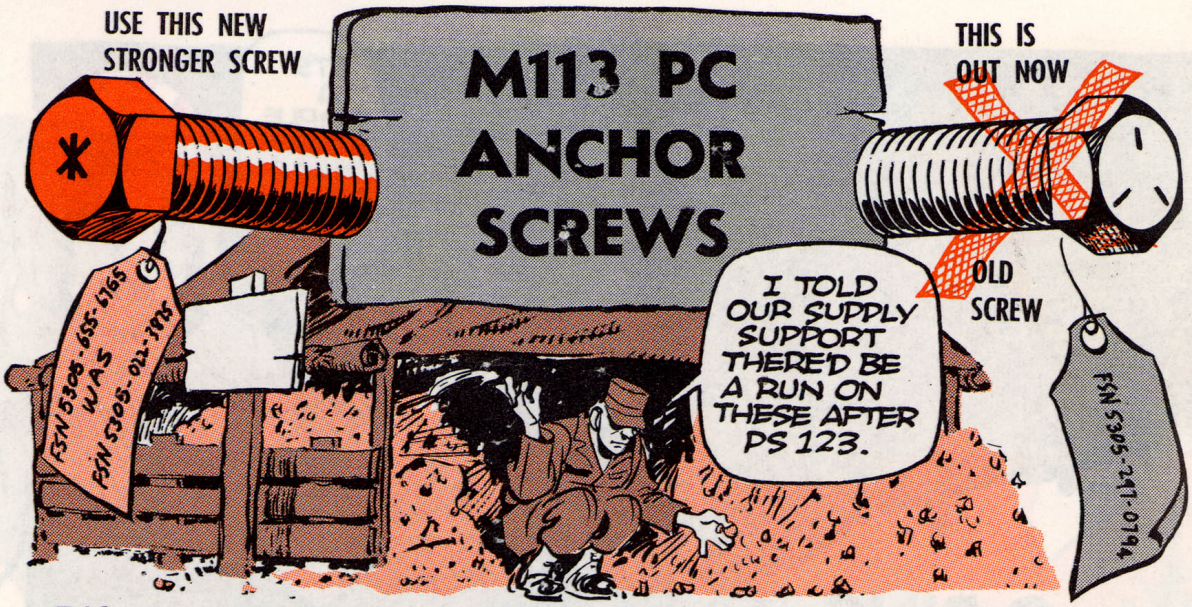
All you have to do to make the photo right is to erase Item No. 11 and draw it in again where it should be, between Item No. 16 and Item No. 2.

Like the text says, Item No. 11 is FSN 5330-505-6212, Packing, Preformed: O-ring, ⅛ thk, ¾ id (501461). However, it is used as a seal for the oil filler plug on the road arm hub cap.

There is no part in the position where Item No. 11 is shown in the figure. The design people originally planned to have one and that's why the photo was taken that way. However, they found they could get along without it, so it never was a part of the production vehicle.

This happened too late for the TM to be changed.

Meanwhile, don't be looking for an O-ring at the Item No. 11 position. You won't find any.



Didyu' read the dope in PS 123, page 11, about the new and stronger torsion bar anchor screws for the M113 PC?

Well this is some more of the same . . . Only now the dope is that on the early production vehicles, F4 through F4754, all of the old, weak torsion bar anchor screws should be taken out and replaced with the new, stronger types.

Easy to tell which is which. The weak ones have three radial lines on the head and the strong ones have six. The strong ones you want are listed as:

FSN 5305-655-6765, Screw, Cap, hexagon head: alloy-S, cd- or zn- pltd, ¾-16UNF-2Ax2.

In some old supply pubs they are also listed under the alias of FSN 5305-022-3825, but it means the same thing. In fact, soon only the new ones will be in the supply system . . . but that won't help you if you break one of the old bolts, particularly if you have to drill it out or pull the engine to get to it.

So-o-o-o, your best bet is to pull out all the weak, old bolts before they break on you and replace them with the strong FSN 5305-655-6765 jobs.

Nuff said?

HOT NEWS ON HEATERS

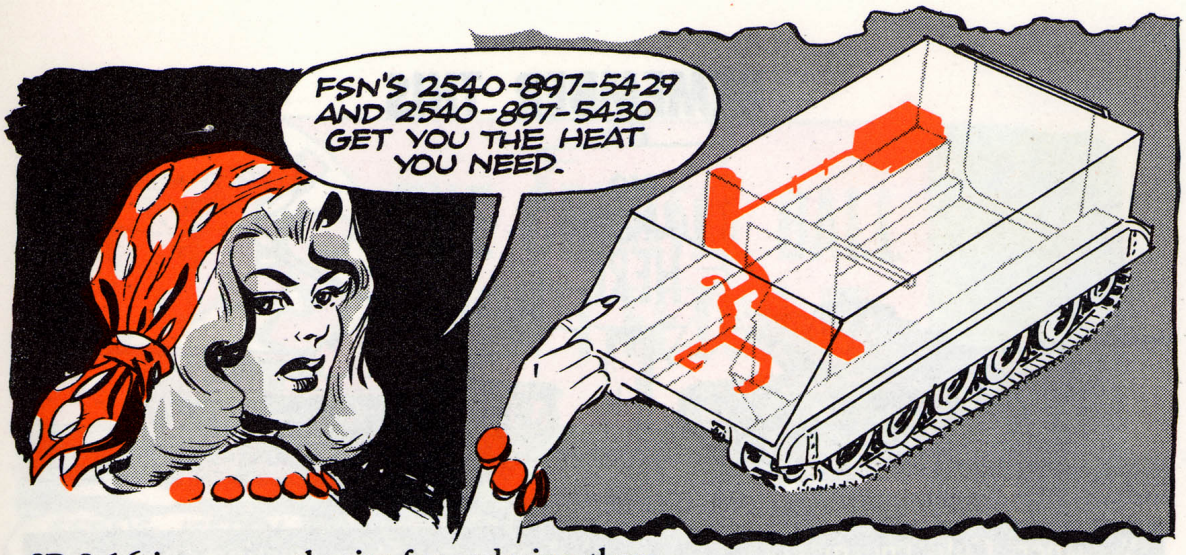
Dear Half-Mast,

What FSN do we use to order the personnel heater kit for our M113 PC and what authority do we quote? TM 9-2300-224-20P (Nov 61) has FSN's for individual parts but nothing for the whole kit.

Capt. Y. B.

Dear Captain Y. B.,

FSN 2540-897-5429, Installation Kit Heater, Vehicular, and FSN 2540-897-5430, Installation Kit, Engine Heater Preheat, are the two kits you order and



SB 9-16 is your authority for ordering them.

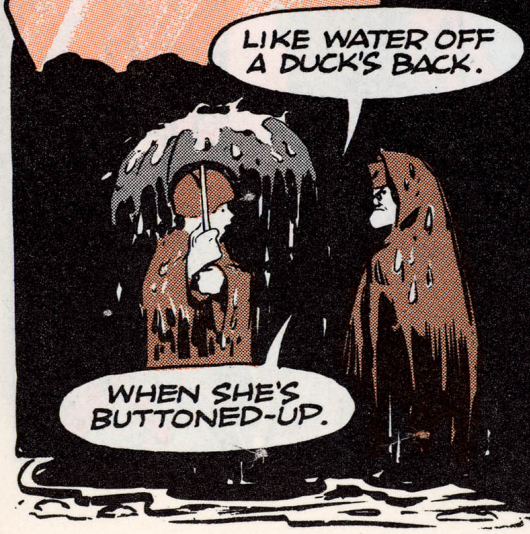
Be sure you use the latest edition of SB 9-16 (30 Jul 62) because it gives the latest rules on getting these kits, including temperatures where they're required.

When you put in your order, you also need to know what consumer funds to cite.

Half-Mast

LIGHTNING PROOF

Dear Half-Mast,
We are wondering what would happen to a tank and its crew if the tank got hit by lightning?
Pvt. W. R. C.



Dear Private W. R. C.,

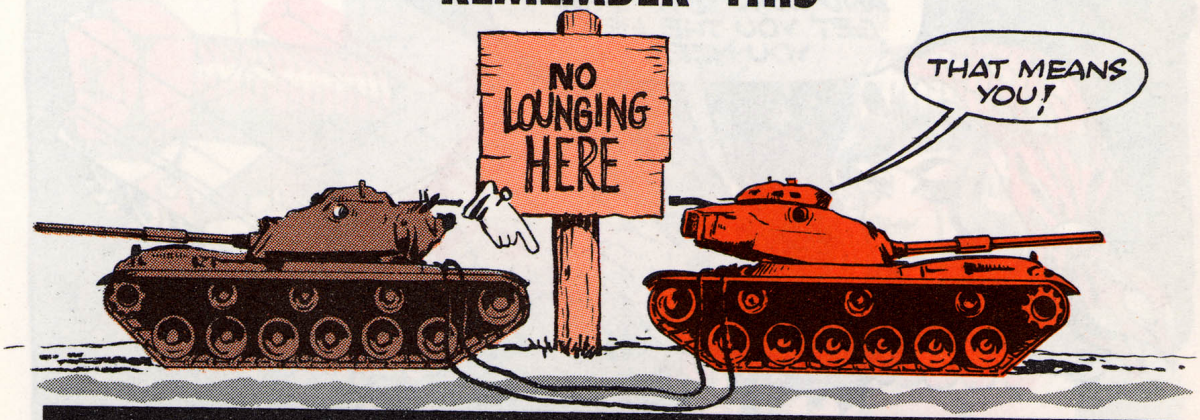
Chances are less than one in two million that the tank would get hit in the first place. A tank is so low it's a poor target for lightning. Trees and things like that are more likely targets.

If a buttoned-up tank got hit the lightning would flow along the outside of the tank and ground out through the tracks. Even though there is rubber in the tracks, they are grounded.

It wouldn't be smart to hide under a tank in an electrical storm or lean against the outside of it. But inside a buttoned-up tank, even though you are touching the hull, you should be real safe.

Half-Mast

REMEMBER THIS



Weather: Cold (normal).
Situation: M60 tank will not start.
Procedure: Slave-starting (normal).
Results: Tragedy!!

What happened during this slave-starting job was a bitter experience for everybody in on the deal.

Three of the crew are now dead—because they'd decided that the best place to relax was right in between the two tanks.

It all happened something like this:

The live M60 was headed nose-to-nose with the cold one. When the dead tank didn't want to start, the driver in the live vehicle decided to back away.

He had kept his tank running at a high idle (about 1200 RPM) which is a normal rate during cold spells so his engine wouldn't stall on him.

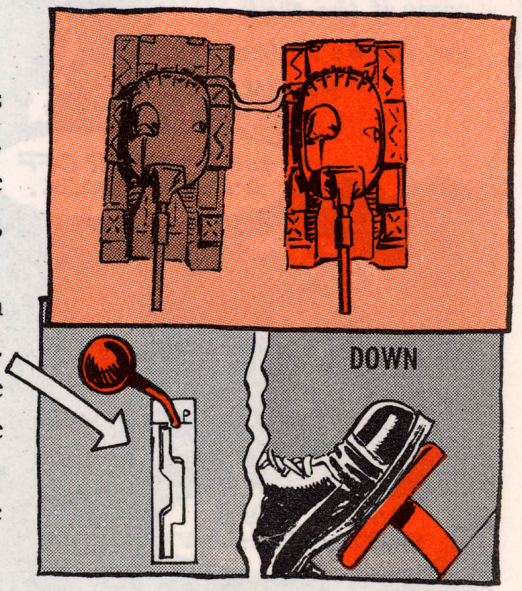
But, when he went to back up there were two things missing—he didn't chop the idle and the brakes were not on.

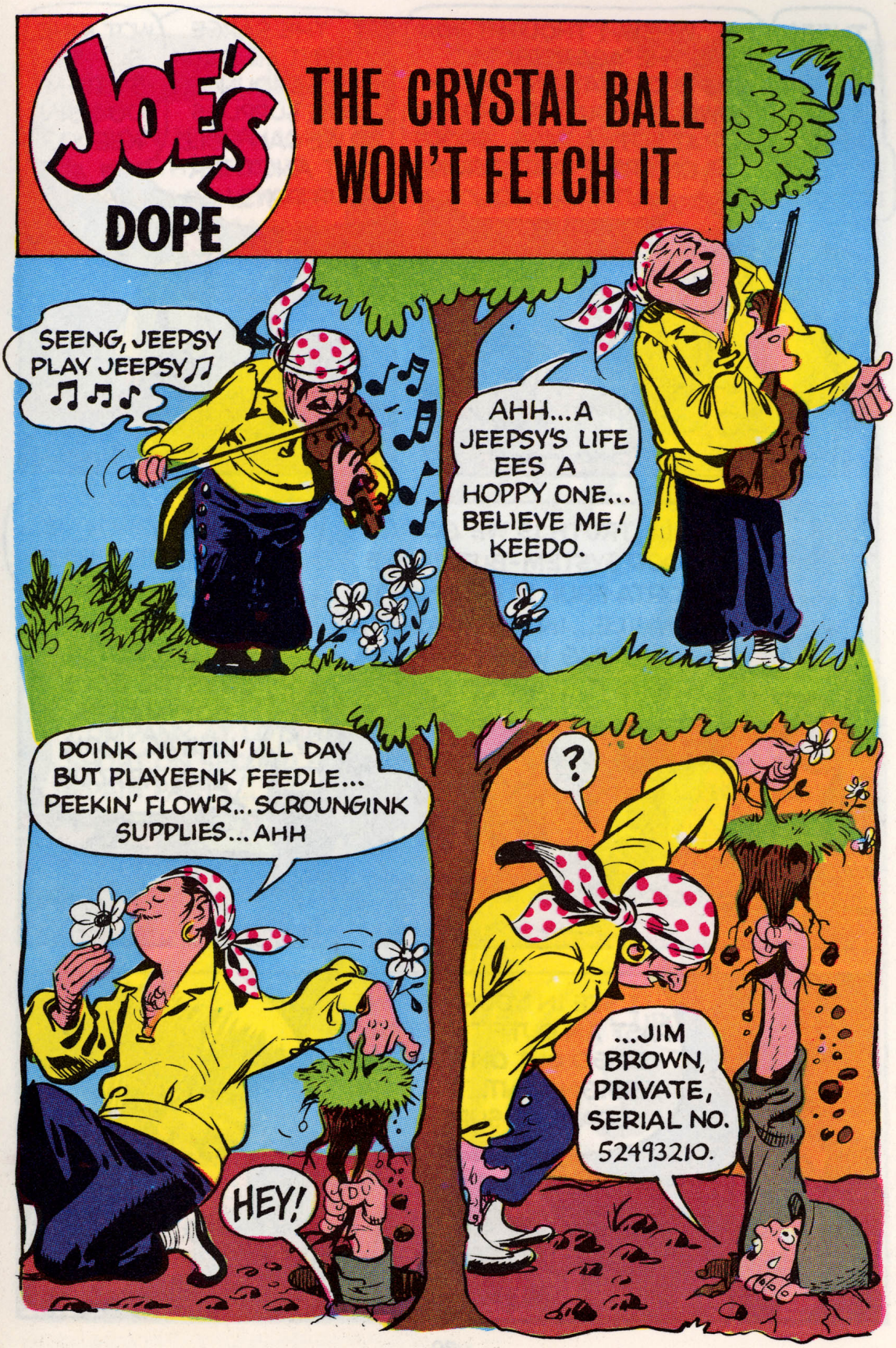
To put 'er in reverse, the shift lever had to travel thru the LOW and HIGH positions. With his tank at high idle, the second he got 'er in LOW she jumped ahead.

The three crewmen never had a chance.

So-o-o-o, remember this:

1. Never, never stand between two tanks while they're moving or being slave-started.
2. Always drive the live tank real close to the dead one when slaving. It's safer, easier, and the cables will reach.
3. Put the live tank's transmission lever in the "park" position **with** the brakes applied.
4. Before you shift out of this position, be sure to keep the brakes ON, and reduce the engine RPM to normal idle.
5. Whenever possible, use the side-by-side position rather than nose-to-nose.




JOE'S DOPE
THE CRYSTAL BALL WON'T FETCH IT
SEENG, JEEPSY PLAY JEEPSY♫
♫♫♫
AHH...A JEEPSY'S LIFE EES A HOPPY ONE... BELIEVE ME! KEEDO.
DOINK NUTTIN' ULL DAY BUT PLAYEENK FEEDLE... PEEKIN' FLOW'R...SCROUNGINK SUPPLIES...AHH
HEY!
?
...JIM BROWN, PRIVATE, SERIAL NO. 5249321O.

THEES EES JEEPSY CAMP KEEDO... WOT'S YOU LOOKIN' FOR?
OH...WHEW, I THOUGHT YOU WERE THE "AGGRESSORS"... THIS IS OPERATION "HOLD-DOWN... MY OUTFIT'S HOLED UP AT LOTKA PASS...SHORT ON SPARE PARTS RUN OUTTA AMMO...
THE SARGE SENT ME BACK TO SCROUNGE SOME SUPPLIES SO WE CAN HOLD OUT ANOTHER FOUR DAYS!
WOT KINE SUPPLY SYSTEM YOU USIN' KEEDO?
WELL, TRUTH IS WE GOT A GOOD SYSTEM-BUT, ER, WE SORTA FOUL IT UP ONCE IN A WHILE... IN THIS CASE THE PLANNING WAS WHERE IT STARTED...
COME WEETH ME... MY SEESTER WEEL GEEVE YOU A LEETLE ADVICE ...SHE'S GOT A CRYSTAL BOLL DOT MAKES UNIVAC LOOK LIKE ABACUS.
I SEE IN YOUR RECENT PAST AN OUTFIT PREPARING TO GO OUT ON A TACTICAL ASSIGNMENT...THEY ARE LOADING SUPPLIES...

GOIN' KINDA LIGHT ON TH' SECOND ECHELON STUFF AINTCHA, SARGE?
NAH, WE DON'T REALLY NEED IT ALL, IT WAS CHECKED OUT YESTERDAY... BESIDES I LIKE LOTSA SACK ROOM!
AHH, NOW I SEE YOUR COMPANY AT LOTKA PASS... SHORT ON SECOND ECHELON REPAIR PARTS... LOTS OF ROOM TO SLEEP IN TRUCKS BUT...
THAT'S US ALRIGHT.
OH-OH-I SEE YOUR PLATOON SERGEANT VERY WORRIED!! YES, NOW WEAPONS ARE BREAKING DOWN...POOR PREVENTIVE MAINTENANCE IS TAKING ITS TOLL!!
@★!!@ WHAT'S WITH THEM GUYS UPON THAT HILL?

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BU

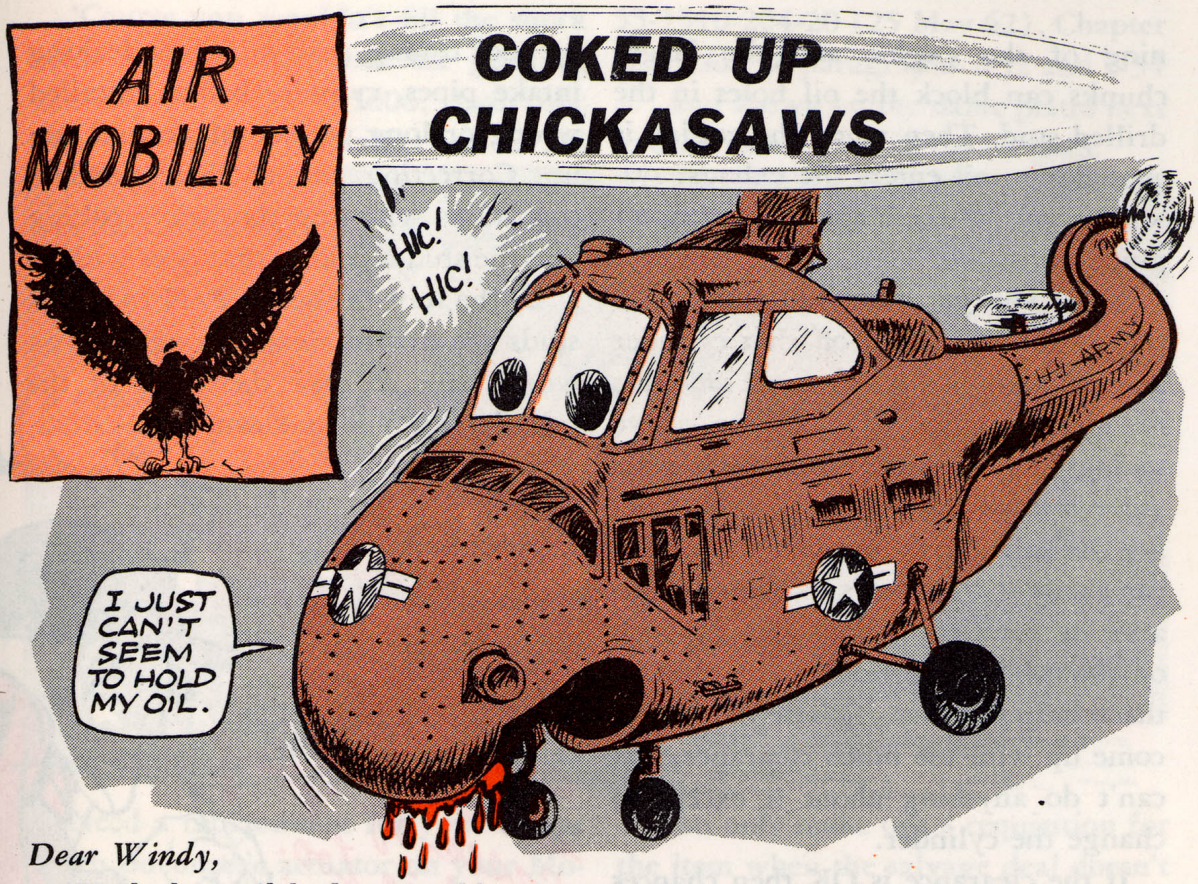
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

LLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

WOT'S WRONG UP HERE ? -
SARGE... WE'RE HURTIN' FOR PARTS... OUR MG CRAPPED OUT ON US... WE'RE IN NEED OF REPLACEMENTS.
OKAY, OKAY, I'LL SEE WOT I CAN DO ABOUT SCROUNGIN' SOME FOR YOU!
RING
IT'S FOR YOU, SARGE!!
THANKS.
...YEH...WOT? OH, NO, NOT YOU GUYS TOO!!...OKAY, OKAY, I'LL SEND BROWN OUT TO SCROUNGE SOME!
SO, HERE I AM NOW, WHAT DO I DO...?
SO, WE SCROUNGE JEEPSY STYLE!

SO... AS DARKNESS FALLS
HALT!
EES UNLY JEEPSY, KEEDO! WE GOT A TROOP ENTERTAINMENT UNIT!
REET!
HOKAY, NOW, BROWN INTO THE WAGON WEET STOFF WHILE THEY STILL EATIN' OPP SHOW...
HOW YOU LIKE DAT KEEDO... SLEEK AS A CHEEK, NO??
MAN, I'M IN LIKE FLYNN.

HEY...BROWN WHERE'D Y'GET THE STUFF... AND WOT'S WITH THE GYPSY BIT?
DON'T ASK QUESTIONS SARGE... JUST COME AND GET 'EM!
OKAY, MEN, WE GOT THE STUFF... NOW LET'S MOVE OUT AND CLOBBER THEM...
JUST A MINIT!! NOT SO FAST... YOU ARE CAPTURED!
YES, IN REALITY WE'RE AN AGGRESSOR INFILTRATION GROUP.
WHAT YOU HAVE JUST EXPERIENCED IS AN EXAMPLE OF "CRYSTAL-BALL" SUPPLY PLANNING PLUS MAINTENANCE MANAGEMENT THAT WAS FAULTY.
THE LESSON YOU ARE LEARNING IS "DRAG ALONG EVERYTHING YOUR MAINTENANCE CALLS FOR BECAUSE GOOD PM AND GOOD SUPPLY GO TOGETHER LIKE GYPSIES AND VIOLINS!"
P.O.W.



Dear Windy,

We had an oil leakage problem on a high-time and a low-time R1300-3 engine in two of our Chickasaws (UH-19D). On one bird, a cylinder dumped enough oil into the exhaust system to wet the inside of the collector ring. On the other, oil streamed over the outside of the exhaust pipe.

After changing the cylinder on the high-time engine we found out that the rocker box lubricating tube assembly's internally relieved stud, P/N 145360, was plugged with carbon. So the oil had leaked past the valve guide into the cylinder and exhaust pipe.

On the low-time engine we "saved" a cylinder change (and a lot of sweat) simply by ream-cleaning the stud on the spot.

But we're still puzzled as to what causes the carbon to form! Can you figure it?

Sp-5 M. D. R.

Dear Specialist M.D.R.,

That's using the ol' bean to spot the reason for clogged rocker box drains.

On the low-time engine, you can figure that the clogged stud probably wasn't cleaned right at overhaul. So your own cleaning job took care of it.

But on the high-time engine, it looks like you had a case of too much coke and carbon forming in the rocker box.

One of the main causes of coking is too much valve stem-to-guide clearance, especially on the exhaust valve. This lets hot exhaust gases into the rocker box, forming large amounts of coke and carbon in areas like the valve springs. The coke flakes off during run-

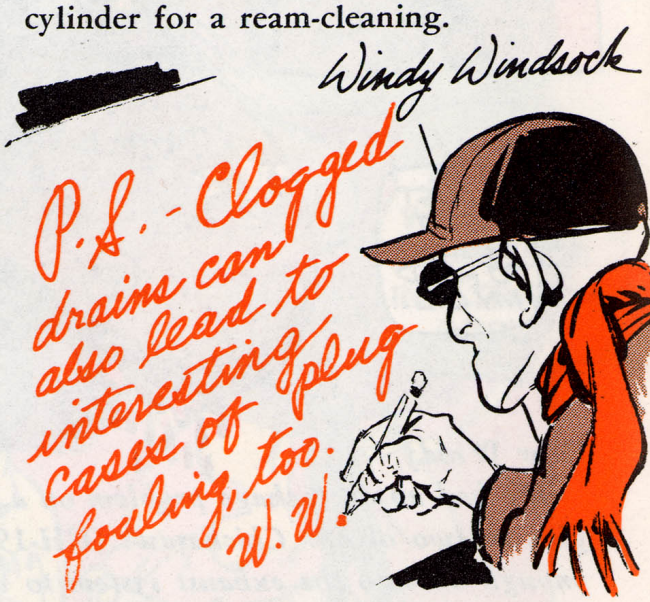
PS MORE

ning of the engine and the larger chunks can block the oil holes in the drilled stud. Then when the engine is shut down, oil enters the exhaust system because of the large valve stem-to-guide clearance.

So, if you get more plugging, take the rocker box cover off that cylinder and take a peek for any large amounts of coke, particularly on the valve springs and washer. Also check your valve stem-to-guide clearance by forcing the valve tip from side to side. You can easily tell if there's too much clearance by comparing the valve tip rock on the coked up cylinder with that on the other cylinders. 'Course, if you do come up with too much clearance, you can't do anything about it except to change the cylinder.

If the clearance is OK then chances are the coking is caused by high cylinder temperatures. This could be caused by poor timing, lean mixtures, leaking intake pipes, cylinder baffles installed wrong or long periods of ground run up. Correcting any of these possible conditions will stop the heavy coking and the stud blocking that goes with it.

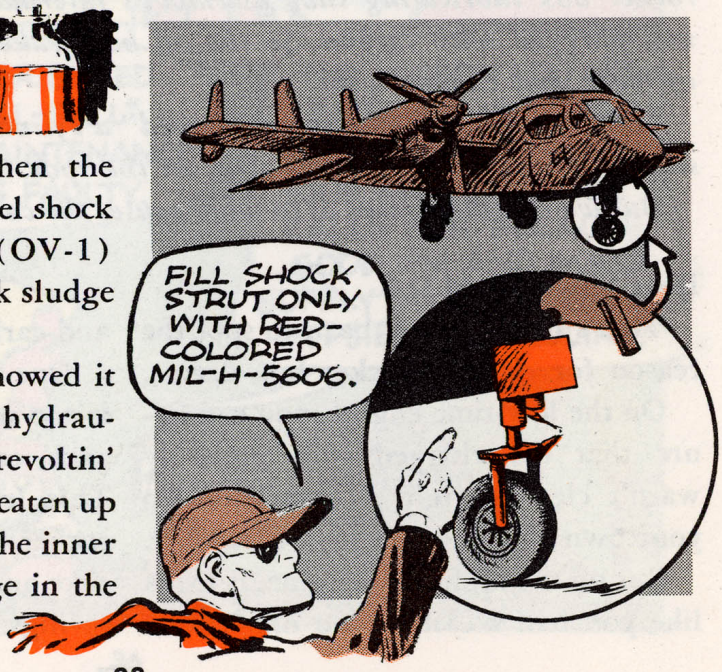
By the way, the newer P/N 145360B studs are drilled clean through so you won't have to take them out of the cylinder for a ream-cleaning.



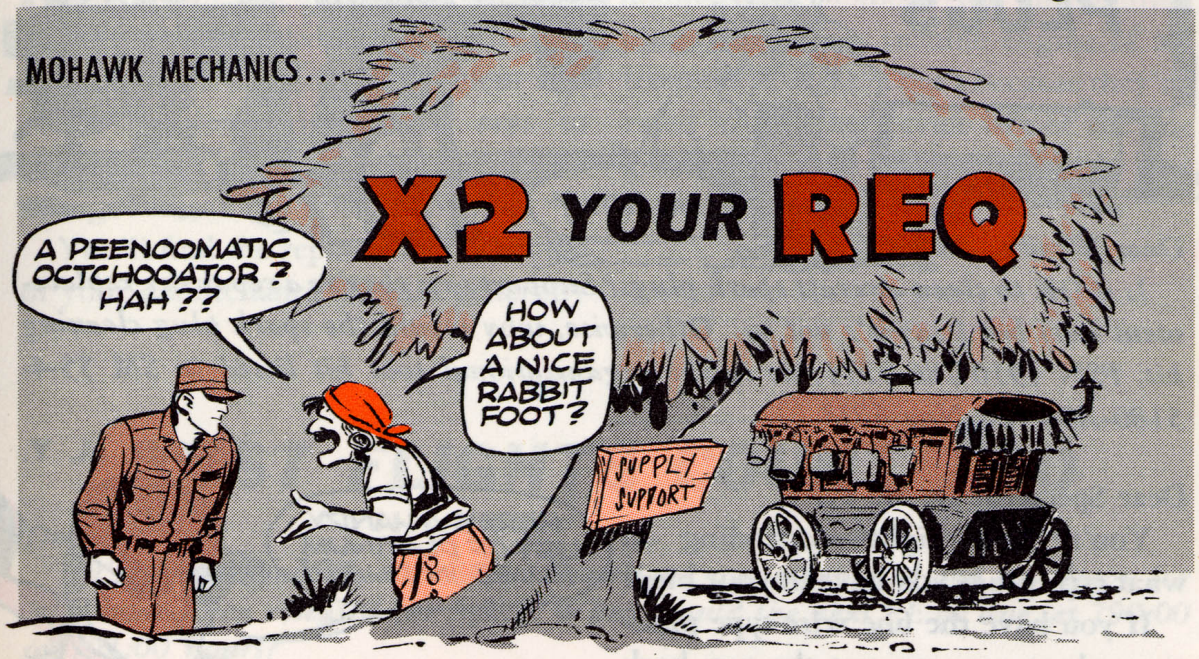
USE GENUINE FLUID

Nobody knows how or when the hydraulic fluid in the nose wheel shock strut of several Mohawks (OV-1) turned from red to a gray-black sludge —but it did!

A check-out of the sludge showed it had graphite mixed in with the hydraulic fluid, and you know what revoltin' developments that can lead to: eaten up seals, binding and sticking of the inner cylinder, and a possible change in the metering setup.



'Course you wouldn't fill the shock strut with anything but the genuine, red-colored, MIL-H-5606, hydraulic fluid—not when it's called out in TM 55-1510-204-20 (25 May 62), Chapter 2, Section II, paragraphs 2-32 and 2-34 . . . and shown on the name plates next to each shock strut in the bargain.



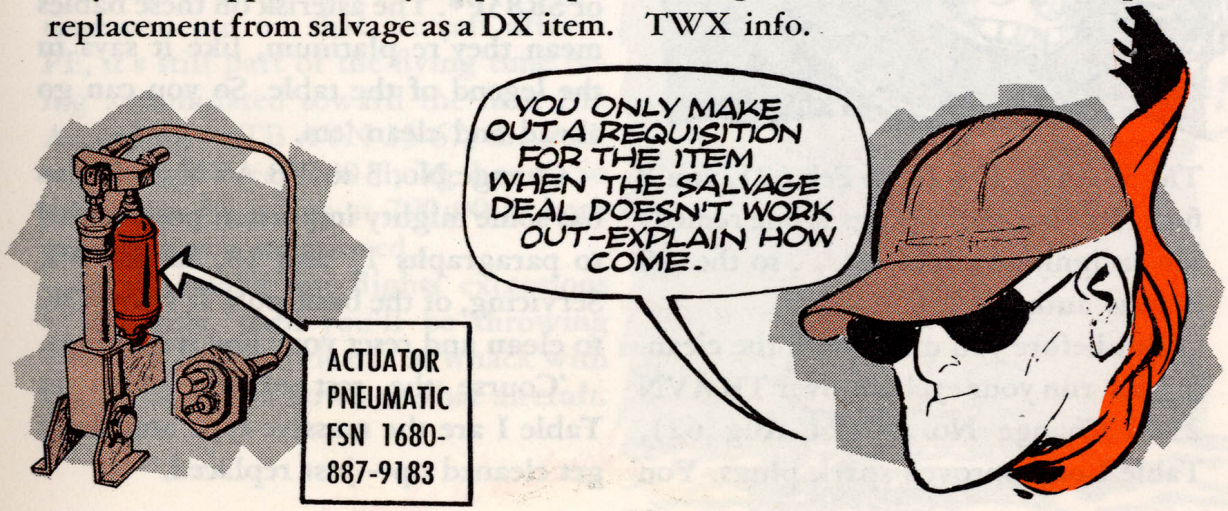
Need a replacement for your escape hatch pneumatic actuator on your Mohawk (OV-1)? Then cancel any outstanding requisitions and pay attention to this supply type info.

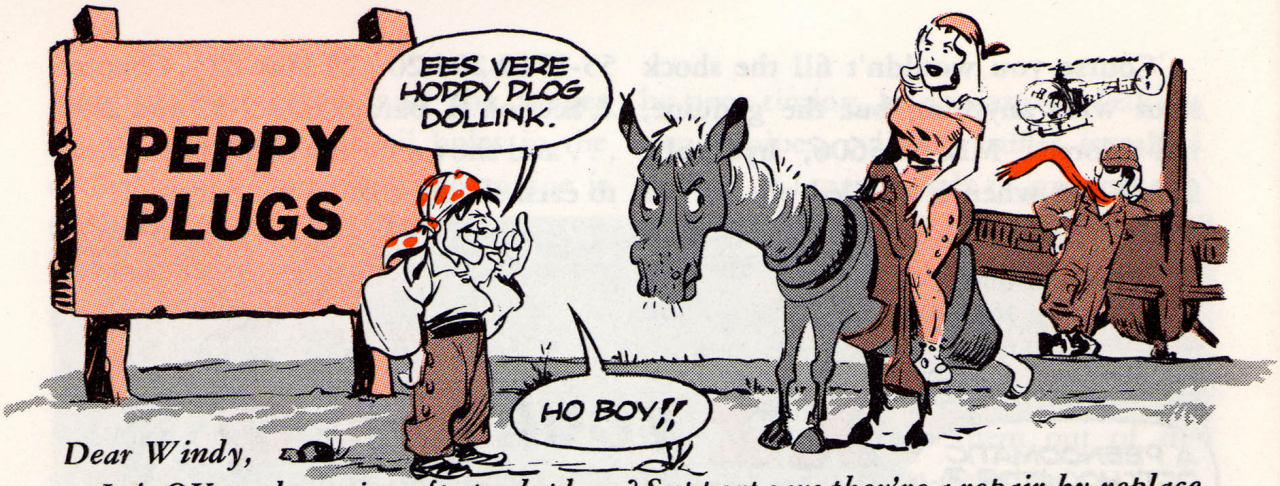
TMC message SMOSM-QIOV-1-03-2121 sets up a source code of **"X2"** for FSN 1680-887-9183 . . . actuator, pneumatic. And the "X2" code means this actuator is not stocked as a repair part. So you're supposed to try to pick up a replacement from salvage as a DX item.

You only make out a requisition for the item when the salvage deal doesn't work out. And you'd better explain how come, because a justification has to go along through supply channels with each "X2" item requirement.

The instructions already in TM 55-1510-204-20 give you an authority for recharging the bottle.

There'll be a AVSCOM supply letter coming out which will back up this TWX info.

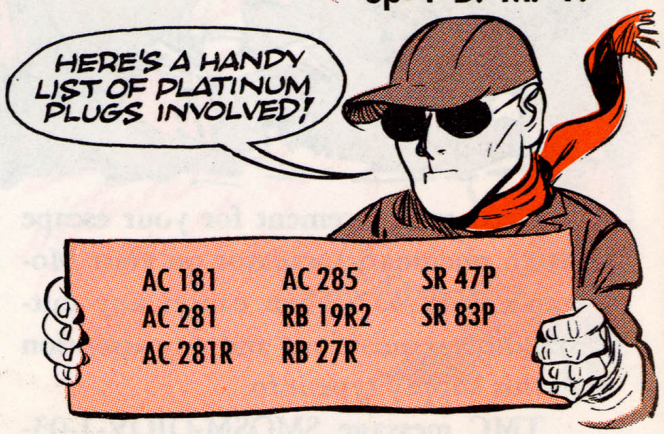




Dear Windy,

Is it OK to clean aircraft spark plugs? Support says they're a repair-by-replacement item but I say it's not so. Otherwise, why would the spark plug cleaning kit, FSN 4910-786-9271, be in the organizational tool kit listed in SM 55-4-5180-A08 (28 Nov 62)?

Sp-4 D. M. Y.

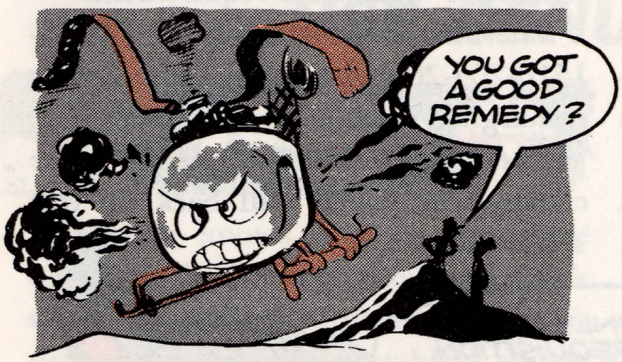


Dear Specialist D. M. Y.,

You're both right—depending on what type plugs you have in your bird!

If you have the fine wire-type platinum plugs you can put the pep back in 'em with your cleaning kit.

Say, for example, you have a Sioux (H-13), and she's kickin' up a fuss that you trace to the ignition system. In Chapter 2, Section IV, Table IV, of



TM 55-1520-204-20 (6 Feb 62), you'll find cleaning of the plugs is one remedy for an ignition problem . . . so the -20 is your authority.

But before you make with the cleaning kit, run your eyeballs over TB AVN 25-8, Change No. 3 (24 Aug 62), Table I on approved spark plugs. You can tell right off whether or not you have a platinum plug by finding your engine model and matching it up with the spark plug it takes.

Your Sioux may have an SR47P* or SR83P*. The asterisk on these babies mean they're platinum, like it says in the legend of the table. So you can go ahead and clean 'em.

Change No. 3 to TB AVN 25-8 also has some mighty important poop added to paragraphs 17 and 18, Section VI, Servicing, of the basic pub. It's now OK to clean and reset your fine wire plugs.

'Course the rest of the plugs in Table I are the massive-type and don't get cleaned up—just replaced.

Take the Bird Dog (L-19). In Chapter 3, Section V, on page 5-1 of TM 55-1510-202-20 (19 Apr 61), there's a replacement schedule which says you change the plugs every 200 hours. So, unless you've an ignition problem and your troubleshooting chart says to change the plugs on the spot, you change 'em at the scheduled time.

You'll find the replacement schedule of your maintenance manual generally has the poop on plug life, but there are exceptions. For example, you won't find a replacement in the organizational maintenance manual for the igniter plugs on the gas turbine engine of an Iroquois (UH-1). That's because they're rated to last the service life of the engine. If a plug should go bad, you just change it.

Windy Windsock

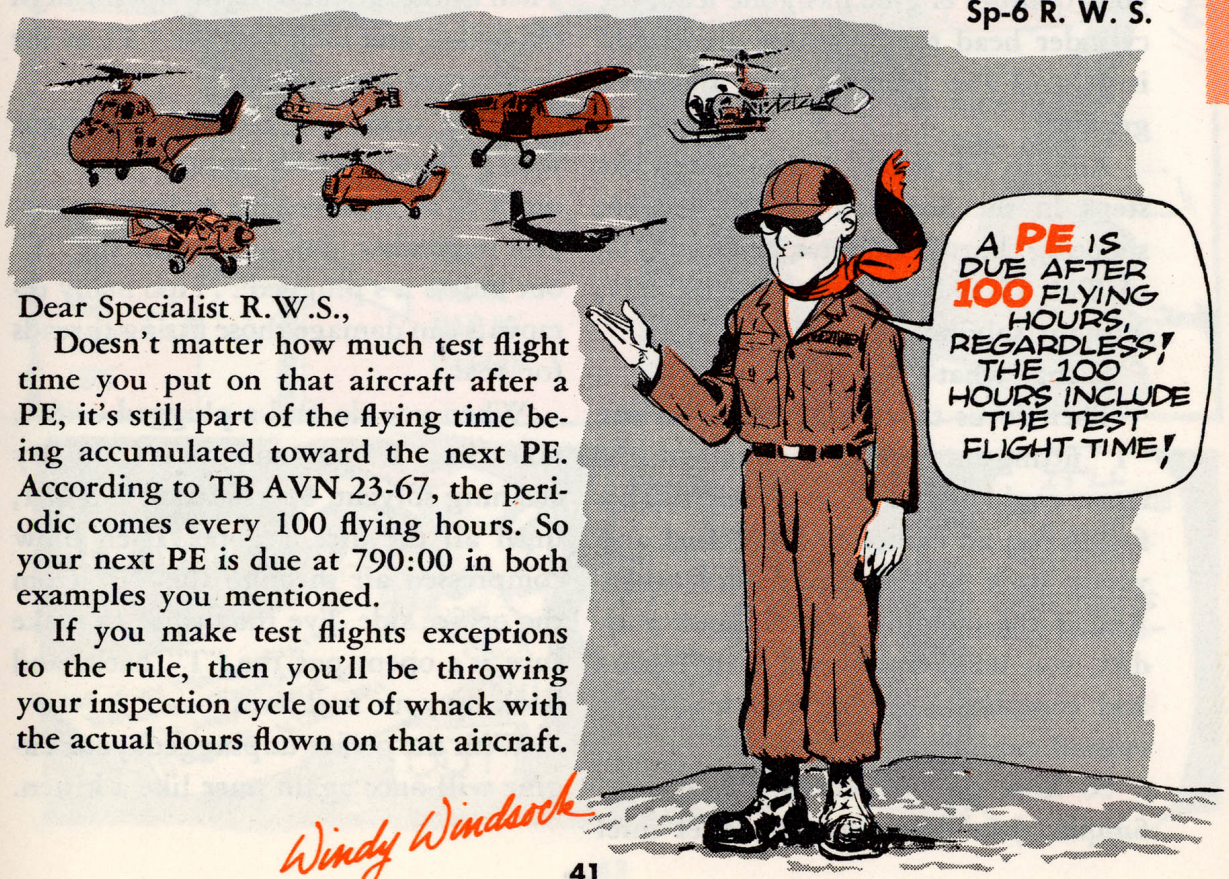
TEST FLIGHTS COUNT TOO

Dear Windy,

Let's say a PE was due at 690:00 hours and was completed and test flown for 1:00 hour, then released for flying. When would the next PE be due, at 790:00 or 791:00 hours?

And suppose the aircraft was not released for flying, requiring a second test flight. When would the next PE be due?

Sp-6 R. W. S.



Dear Specialist R.W.S.,

Doesn't matter how much test flight time you put on that aircraft after a PE, it's still part of the flying time being accumulated toward the next PE. According to TB AVN 23-67, the periodic comes every 100 flying hours. So your next PE is due at 790:00 in both examples you mentioned.

If you make test flights exceptions to the rule, then you'll be throwing your inspection cycle out of whack with the actual hours flown on that aircraft.

Windy Windsock

"LEAN MIXTURES???"

You say during ground operation your 0-480-3 engine has gone lean, the cylinder head temperatures are climbing, and she sounds like a coffee grinder?

And, to top it off, you followed the steps in the Seminole (U-8) trouble shooting chart in Chapter 2, Section III, of TM 55-1510-201-20 (5 Mar 62), without solving the problem?

Is that what's buggin' you?

Then focus those baby blues on the "T" fitting in the fuel vent return system—could be the trouble-maker. This fitting has an orifice to bleed fuel and vapor back to the bird's fuel tanks. And if the opening gets clogged with dirt, you wind up with a **lean** engine and complications that can lead to a **ruined** engine.

So how do you check the fitting? Simple. Just disconnect the fuel inlet line and the return line from the "T". Then shine a small light up through the orifice and look into the "T" at the fuel return connection.

If the orifice is blocked, the light won't show; which means the "T" needs to be removed for a cleaning job. Just remember, tho, not to take the "T" out unless it's plugged . . . too many removals can damage those fitting threads for real.

When you do find a plugged orifice, take the "T" out and soak it in dry cleaning solvent, Specification P-S-661, until all the dirt is gone. Then blow compressed air through the "T" from the orifice side. Eye the orifice to make sure it's open, put the "T" back, and hook up your fuel lines.

With the orifice unplugged, your engine will once again purr like a kitten.

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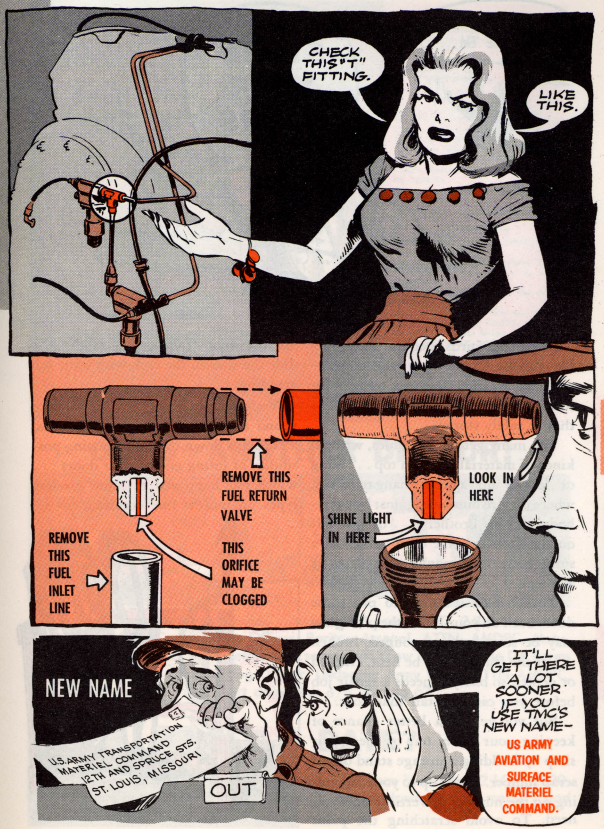
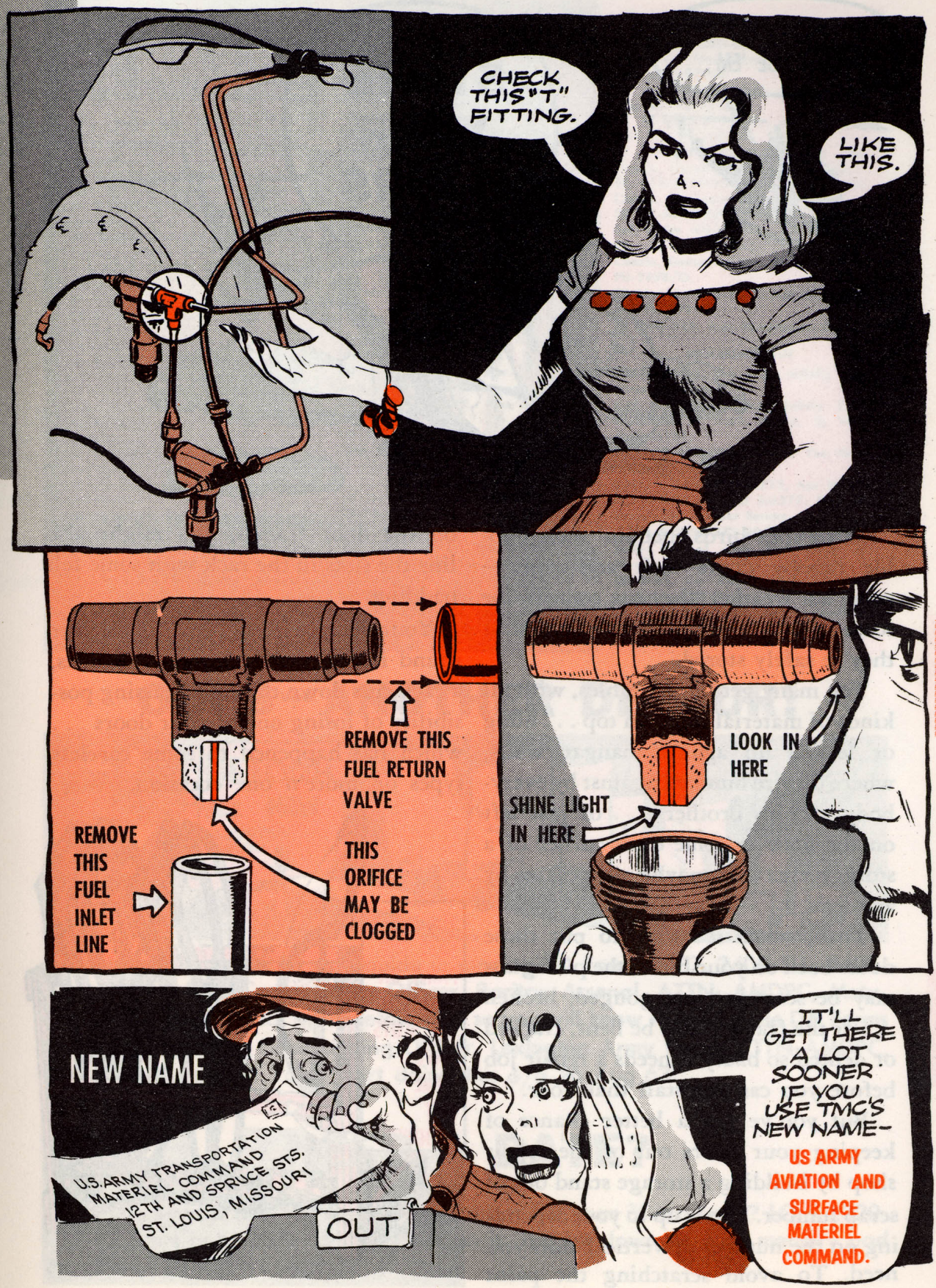
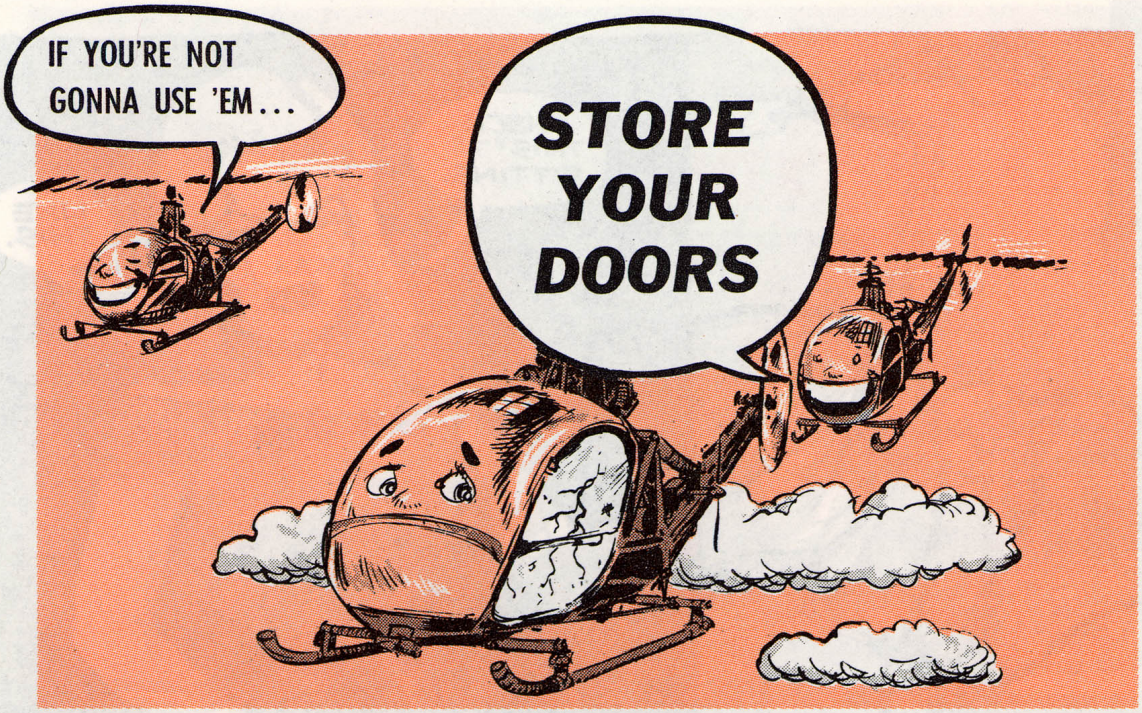



CHECK THIS "T" FITTING.
LIKE THIS.
REMOVE THIS FUEL RETURN VALVE
REMOVE THIS FUEL INLET LINE
THIS ORIFICE MAY BE CLOGGED
LOOK IN HERE
SHINE LIGHT IN HERE
NEW NAME
U.S. ARMY TRANSPORTATION MATERIEL COMMAND 12TH AND SPRUCE STS. ST. LOUIS, MISSOURI
OUT
IT'LL GET THERE A LOT SOONER IF YOU USE TMC'S NEW NAME-
US ARMY AVIATION AND SURFACE MATERIEL COMMAND.



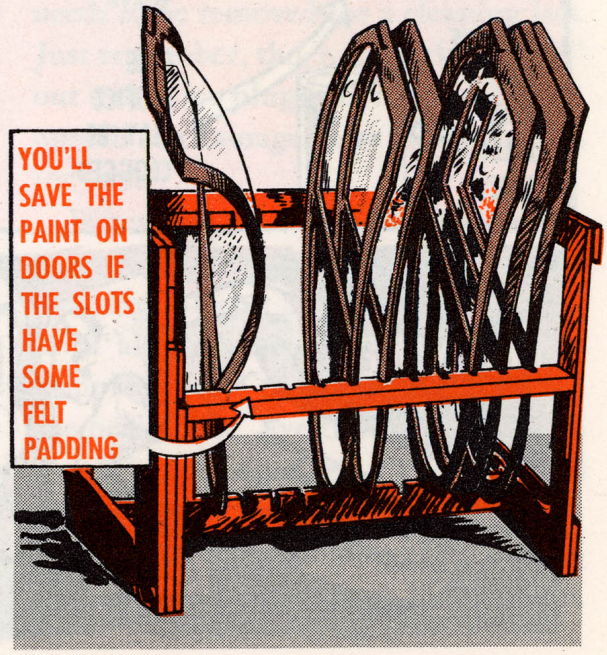
With your birds sheddin' their bubble canopy doors—left and right—come hot weather, they can come in for some pretty rough treatment unless they're safely stored.

Too many get left on tables, with all kinds of material piled on top . . . hung or leaned up against hangar walls, where they're bumped against by everybody and his brother . . . or just left on the floor in some dark corner of a storage area and maybe stepped on by accident.

Then, when it's time to put those doors back on your birds, the plexiglass may be scratched up, gouged, broken . . . or the frame could be bent, cracked or dented so badly it needs a repair job before you can reinstall that door.

But you've got a better chance of keeping your doors out of the repair shop by building a storage stand out of scrap lumber. Size is up to you, depending on the number of vertical slots you need. To avoid scratching the paint on the door frames, you might also line the slots in the rack with some felt padding.

Your doors will stay healthy all year round if you—**rack 'em up!** Besides, a rack cuts down the embarrassing possibility of losing one of your doors . . . which has happened to some careless types on more'n one occasion.



A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.

TECHNICAL MANUALS

TM 3-1040-222-25P, Apr Apparatus, Land Mine, M2.
TM 5-2230-204-25P, Apr Hammer, Track Spike Nordberg Model AH.
TM 5-3895-201-20, Apr Distributor, Bituminous.
TM 5-3895-261-25P, Mar Heater, Bitumen; Cleaver Brooks Model DS.
TM 5-4210-204-20P, Apr Trailer, Fire, Lofstrand, D-9801-1-A.
TM 5-6115-276-15, Mar Generator Set, Keco Model EG-2.
TM 5-6115-337-20P, Mar Generator Set Buda Model DT 30A3-CE.
TM 8-6525-211-15P-C3-RP, Jan Repair Parts, X-Ray Apparatus Dental.
TM 9-2320-238-10, Mar Recovery Vehicle, Armored, M578 (T120E1).
TM 9-5060-12, Feb Corporal Ground Handling.
TM 9-5064-12, Feb Corporal Ground Con Equip.
TM 10-267, Mar, Repair, Clothing and Textiles.
TM 10-500-8, Mar Airdrop, Supplies and Equipment.
TM 10-500-106-2, Mar Airdrop, Supplies and Equipment.
TM 10-1670-221-23P, Apr Parachute, Cargo Extraction.
TM 10-4930-201-23P, Apr Dispensing Pump, TOKHEIM Model 1117.
TM 11-5820-398-20P, Mar Radio Set AN/PRC-25.
TM 11-5820-499-20P, Mar Radio Set, AN/GRC-125.
TM 11-5820-501-12, Oct Antenna Group AN/FRA-53 (Collins 237A-1A).
TM 11-5895-316-15, Jan Communications Central AN/TSC-18 and AN/TSC-19.
TM 11-6625-490-15, Jan Preamplifier AM-1839B/USM.
TM 11-6625-534-15P, Apr Coaxial Frequency Meter PRD Type 583-D.
TM 11-6680-200-20P, Apr Tachometer, Electronic TS—806/U.
TM 11-6940-209-10, Apr Radar Trainer AN/ULT-T5.

LUBRICATION ORDERS

LO 3-4230-203-12, Mar M9 Decontaminating Apparatus.
LO 5-4930-200-20, Apr Lubricating Unit, Power Operated.
LO 9-2330-235-12, Apr Hawk Vehicles.
LO 10-3930-227-20, Apr Truck, Lift, Fork, MHE 177.

SUPPLY MANUALS

SM 5-4-1090-501, Apr Sniperscope.
SM 5-1-C7-12-SL-1-3, Apr Fittings, Hose, Pipe, and Tube.
SM 5-2-C7-13-PL-1, Apr Valves.
SM 5-C8120-ML, Jul Commercial Gas Cylinders.
SM 8-1-C3-11-1, Jul Medical Materiel.
SM 11-4-5180-R15, Apr Tool Kit, Surveillance System TK-104/USD-1.

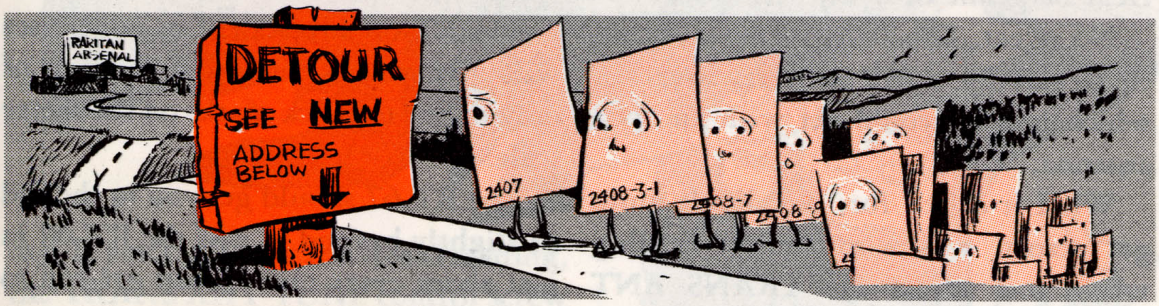
TECHNICAL BULLETINS

TB 9-2300-260-10, Apr Warning Light for Over-Hanging Loads on Military Vehicles.
TB 11-5825-211-12/1, Mar Generator Set, PU-322/G.
TB 11-6115-219-12/1, Mar Generator Set, PU-248/U.
TB 11-6115-222-12/1, Mar PM Checks, Generator Set, PU-290/MR.
TB 11-6115-223-12/1, Mar PM Checks, Generator Set, PU-294/G.
TB 11-6115-225-12/1, Mar Beacon Set, Radio AN/GRN-11.
TB 11-6115-226-12/1, Mar PM Checks, Generator Sets, PU-269A/G & PU-269B/G.
TB 11-6115-236-12/1, Mar Generator Set, PU-378/G.
TB ENG 143, Mar Paratrooper Decoy.

MISCELLANEOUS

AR 725-50-1, Feb DOD Activity Address Directory.
DA Cir 385-3, Mar Safety - Safe Operation of Truck, Utility, ¼ Ton, 4x4, M151.
DA Pam 355-200-13, Mar The New Army Division Structure.
MWO 9-2300-224-20/12, Apr M113 PC: XM474 E2, and XM577: Repl of Torsion Bar Anchor Screws.
MWO 9-2350-215-20/15, Apr Tank, M60: Inst of Amm Rack Strap of Mount Bkt Clevis Pins.
SB 3-35, Apr Req of Auth But Unavailable CBR Items.
SB 8-75-33, Apr Army Medical Supply.

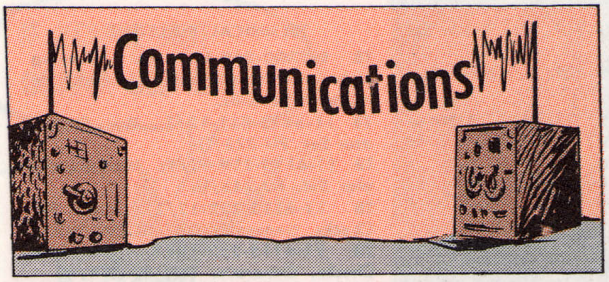
OOPS—ANOTHER DETOUR!



Been following PS 127 as a guide in sending DA Forms 2407, 2408-3-1, 2408-7, and 2408-8 to Commanding Officer, Raritan Arsenal, ATTN: AMDPC, Metuchen, N. J.? Better stick up a detour sign so you will know to send those DA Forms to this new address: Commanding Officer, Lexington Army Depot, ATTN: AMDPC, Lexington, Kentucky. You'll start doing this o/a 26 Aug 63.

NEED A DATE?

Do you need a date for the new lube order for your ¾-ton truck? LO 9-2320-212-12 came out with no date printed on it. Just jot down on your memory pad that it's 14 Dec 62.



RT-66-

Dear Half-Mast,

The "SHOOT FOR THE MAX" article on page 45 of PS 122 has caused considerable talk around here, and we're pretty much agreed that an "all the way over to the right" reading in the RF position on the M301 meter of the RT-66-68 is misleading.

A full scale reading would indicate the antenna was disconnected or improperly loaded, due to an open antenna circuit or internal trouble in the set.

Would you clarify this?

SFC R. E. S.

Dear Sergeant R. E. S.,

No sweat. The article wasn't intended to call for a full scale reading . . . which is what you'd get with an open antenna.

What it called for, but didn't quite get across, was a maximum reading when you adjust the TRANS ANT COUPLING and TRANS ANT TUNE control screws. In other words, don't stop in the red if the adjustment will take you beyond it.

The key words here are "maximum reading," and you're right . . . it wouldn't be ALL the way over to the right.

Fact is, a maximum reading in some sets wouldn't even get you to the red. Like with the RT-66, f'rinstance.

The RT-66 adjustment in most cases will give you a maximum reading of only one or two tick marks on the meter scale.

The RT-67 should get you in the red or slightly beyond it, and the RT-68 in just about every case should get you to the right of the red.

No matter, you always shoot for a maximum reading . . . and stop when you get it. The point is, even if you don't get that needle to the right of the red, get it as far as it will go.

I might add that you peak for RF on each whole megacycle reading on your set . . . and not just one setting. Like, peak on 25.0 MC, 26.0, 35.0, 36.0, 53.0, 54.0 and so on. Each whole read-

Communications

RT-66-68

Dear Half-Mast,

The "SHOOT FOR THE MAX" article on page 45 of PS 122 has caused considerable talk around here, and we're pretty much agreed that an "all the way over to the right" reading in the RF position on the M301 meter of the RT-66-68 is misleading.

A full scale reading would indicate the antenna was disconnected or improperly loaded, due to an open antenna circuit or internal trouble in the set.

Would you clarify this?

SFC R. E. S.

Dear Sergeant R. E. S.,

No sweat. The article wasn't intended to call for a full scale reading . . . which is what you'd get with an open antenna.

What it called for, but didn't quite get across, was a maximum reading when you adjust the TRANS ANT COUPLING and TRANS ANT TUNE control screws. In other words, don't stop in the red if the adjustment will take you beyond it.

The key words here are "maximum reading," and you're right . . . it wouldn't be ALL the way over to the right.

Fact is, a maximum reading in some sets wouldn't even get you to the red. Like with the RT-66, f'rinstance.

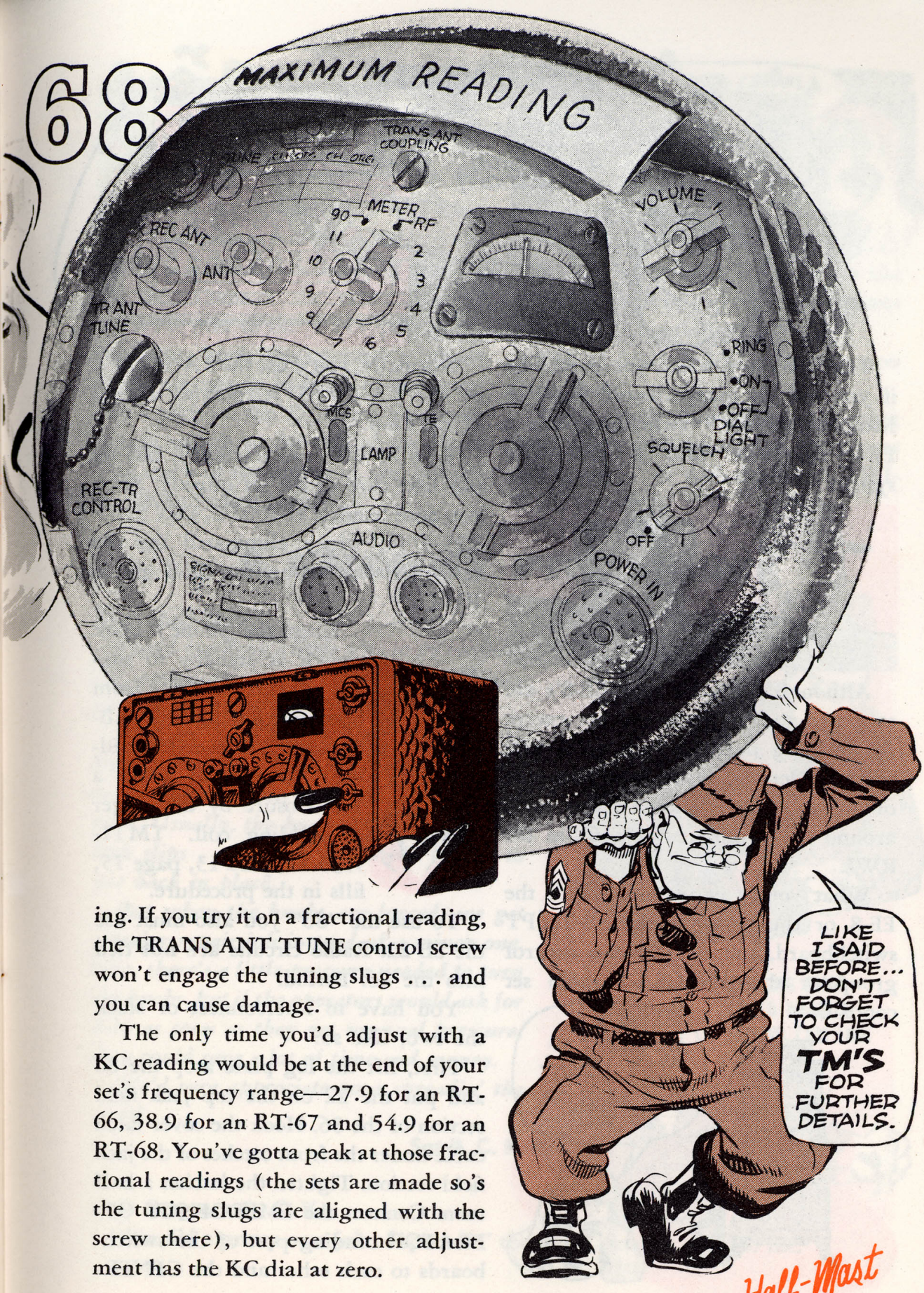
The RT-66 adjustment in most cases will give you a maximum reading of only one or two tick marks on the meter scale.

The RT-67 should get you in the red or slightly beyond it, and the RT-68 in just about every case should get you to the right of the red.

No matter, you always shoot for a maximum reading . . . and stop when you get it. The point is, even if you don't get that needle to the right of the red, get it as far as it will go.

I might add that you peak for RF on each whole megacycle reading on your set . . . and not just one setting. Like, peak on 25.0 MC, 26.0, 35.0, 36.0, 53.0, 54.0 and so on. Each whole reading. If you try it on a fractional reading, the TRANS ANT TUNE control screw won't engage the tuning slugs . . . and you can cause damage.

The only time you'd adjust with a KC reading would be at the end of your set's frequency range—27.9 for an RT-66, 38.9 for an RT-67 and 54.9 for an RT-68. You've gotta peak at those fractional readings (the sets are made so's the tuning slugs are aligned with the screw there), but every other adjustment has the KC dial at zero.



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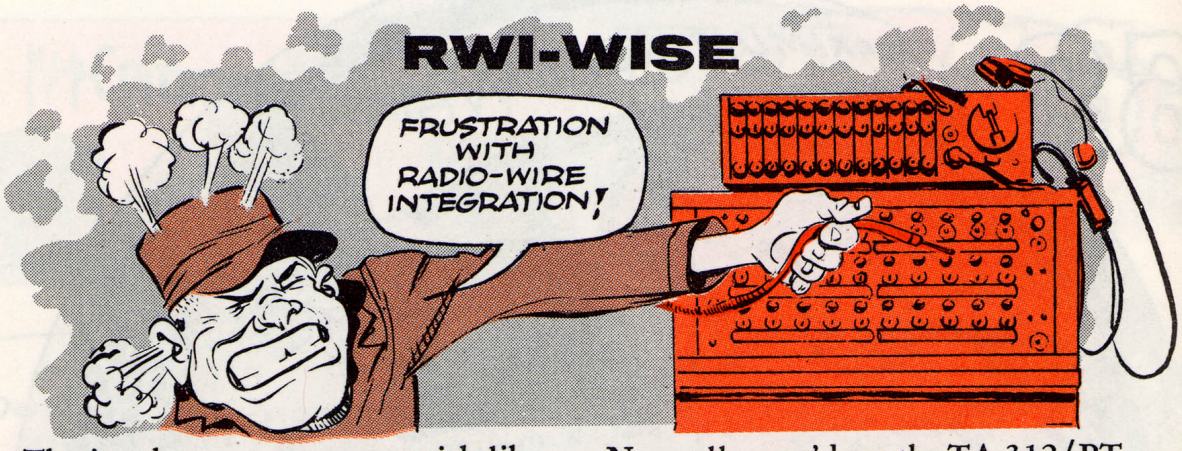
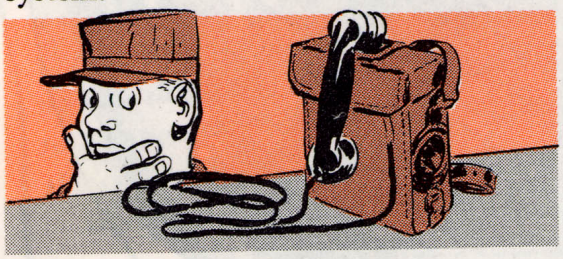
RWI-WISE

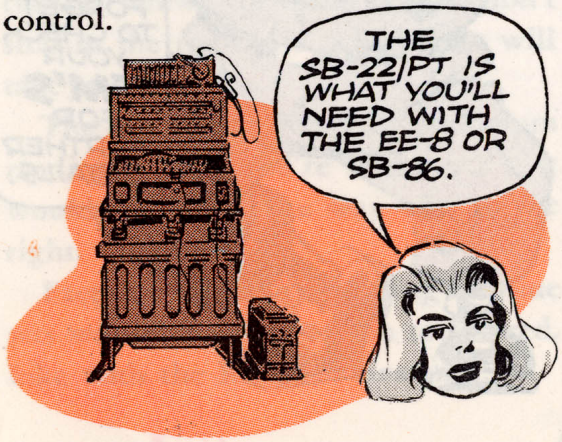


That's what you can get quick-like if you use an inexperienced hand to hook an SB-86/P switchboard or a EE-8 telephone into a radio-wire system.



Although the book says EE-8's are supposed to be off the market except for training purposes, you guys who still have 'em for tactical use (for lack of newer model phones) can stick around for a minute for a fill-in for RWI.

What you're gonna need with the EE-8 or the SB-86 is the SB-22/PT switchboard, the AN/GRA-6 control group or the AN/GSA-7 radio set control.



Normally, you'd use the TA-312/PT or the TA-43/PT telephones instead of the EE-8.

EE-8 MWO's are rescinded, but we can take care of the set quickly. First, you need handset H-100/U, FSN 5965-223-4744, which eliminated the old telegraph key set-up for EE-8 use in RWI.

Keep the phone's hook switch at standby to stop the radio transmitter from operating and place the LB-CB switch in neutral (middle) position to avoid a line closure by the ringer or holding coil. TM 11-5135-15, para 13, page 15, fills in the procedure.

To use the "86" you also must use the SB-22. Radio circuits **are not** tied into the 86. Period.

You have to interconnect or stack the two, like so:

First, lift the log plate atop the 86 and put the 22 on the top jack field section of the 86. Hook the cover latch cable under the front catches of the jack field section. Tighten the latches a half turn. Connect the EMERGENCY OPERATOR binding post of the switchboards to each other and the GENER-

ATOR-POWER Ring No. 16 binding posts (rear of 22) to the EXTERNAL GENERATOR binding posts at the rear of the operator's pack in the 86.

Connect a START-POWER Ring No. 17 binding post in the 22 to the START VIBRATOR binding post on the 86. Connect the other START POWER post to the +24V post in the 86. Now, hook the operator's 'phone to the receptacle in front of the operator's pack on the 22, clamp the push-to-talk switch to the side of the 86 in easy reach of the operator, and put the switch in locked position.

Then, tie the radio circuits into the 22. Do it right or the radio transmitter will operate continuously!

TM 11-5805-262-12 will take you from there.

Those are the finer points in making RWI work with outmoded equipment still in use . . . or with the SB-86. RWI-Wise, you are.

A KNOBBY PROBLEM

Dear Half-Mast,

Could you drop a little note in PS reminding operators not to force the frequency control knobs on the RT-66-68 radios?

We get sets in our shop because the knobs were forced and busted up the flexible coupling shaft, the cam assembly, or both. Usually, the knob sticks when a cam link slips . . . which is simple for us to put back in place.

But when the knobs are forced, we get a major repair job instead of a minor one. Sure, there's a little pressure needed to turn the knobs, but if the operators would ask for help as soon as they get unusual pressure, they could save a lot of time and money.

We'd sure appreciate your spreadin' the word.

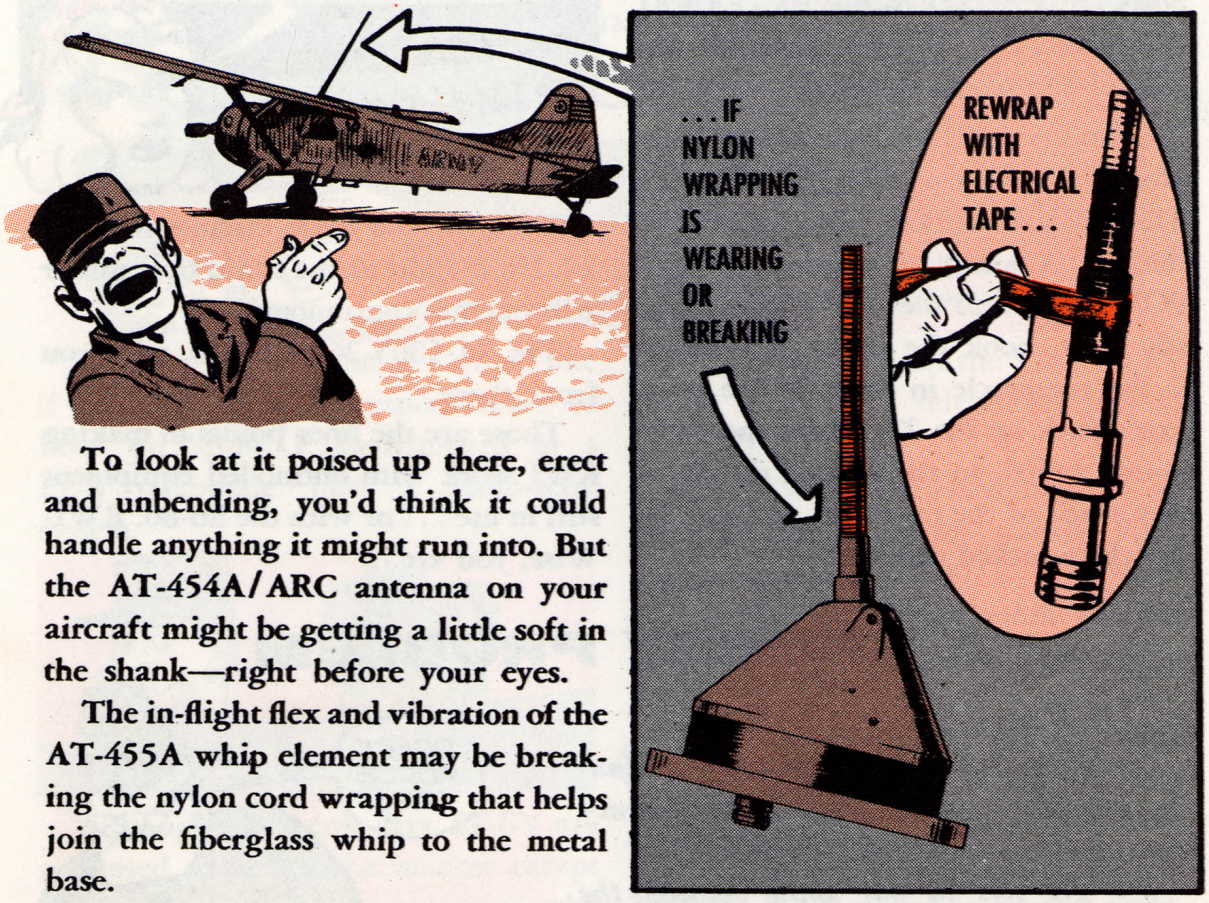
Sgt R. C. K.

Dear Sergeant R. C. K.,

You did a pretty neat job of spreadin' the word. Sounds good to me.

Half-Mast

QUICK—BEFORE IT DROOPS



To look at it poised up there, erect and unbending, you'd think it could handle anything it might run into. But the AT-454A/ARC antenna on your aircraft might be getting a little soft in the shank—right before your eyes.

The in-flight flex and vibration of the AT-455A whip element may be breaking the nylon cord wrapping that helps join the fiberglass whip to the metal base.

Which means you'll have to act quick-like to keep from losing the whip and the use of the ARC-44 ( ) radio.

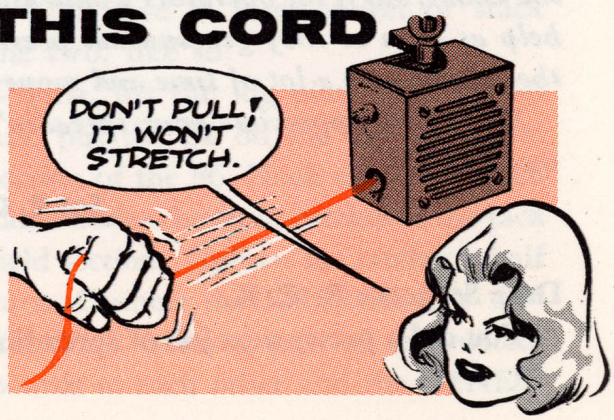
Eyeball the antenna base real close to see if there's any sign of the nylon wrapping wearing or breaking.

If there's any noticeable wear or weakness, remove the wrapping and replace it with electrical insulation tape or a plastic-type tape.

If the whip element AT-455A has been damaged, you can replace it with FSN 5821-552-0499.

You'll want to make a note to give this antenna a little more regular attention than you normally would.

DON'T RIP THIS CORD



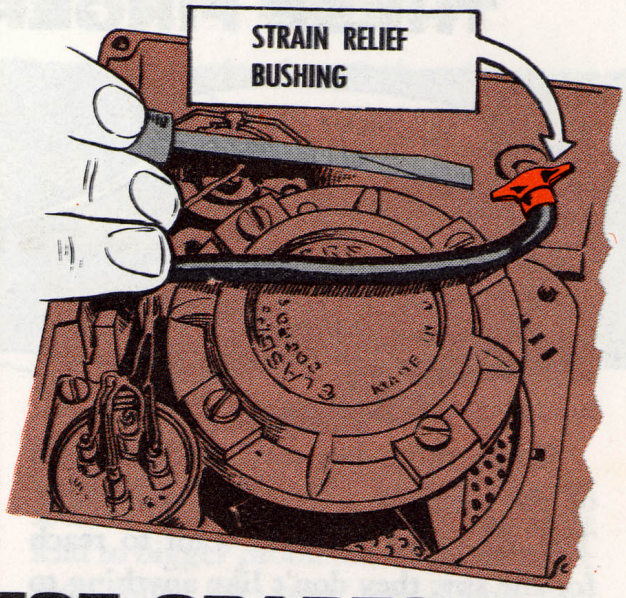
Stretchability is something the electrical cable on the LS-166/U loudspeaker doesn't have. That's a right good point to remember when you're shifting the speaker around in your vehicle.

The cable's just not gonna stretch. If you slip the muscle to this squawk

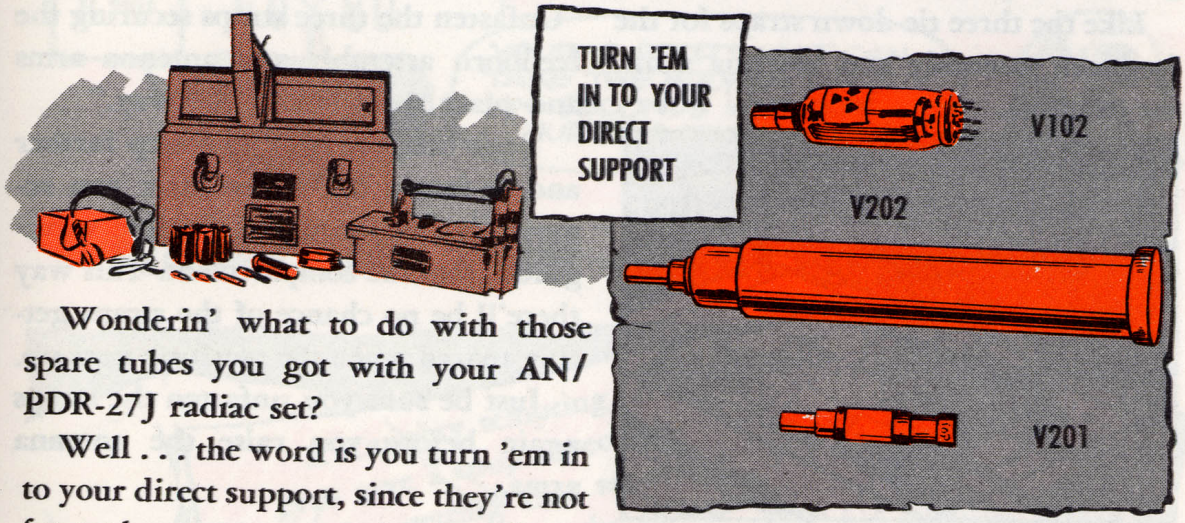
box, the cable'll slip through its strain-relief bushing. The fraction of an inch you gain will pull the wiring off the posts inside the speaker.

Result: Your speaker's got a case of the Deep Silence and your support's got work to do.

Your best bet when you're shifting positions is to keep one hand under the box and one hand on the cable. This way they'll still be coupled and functioning when they get to where they're going.



SPARE THESE SPARES

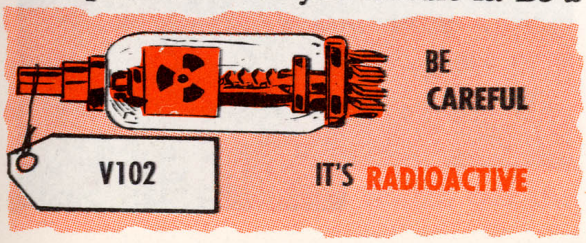


Wonderin' what to do with those spare tubes you got with your AN/PDR-27J radiac set?

Well . . . the word is you turn 'em in to your direct support, since they're not for replacement at organizational level.

We're talking about the JAN type 5962, 5979 and 5980 electron tubes, of course, which go by V102, V201 and V202 in your sets.

Be extra careful handlin' that V102—it's radioactive! If you break one accidental-like, doublecheck TB SIG 225 (6 Apr 62) before you handle it. Be a good idea to check the TB even if you don't break one.

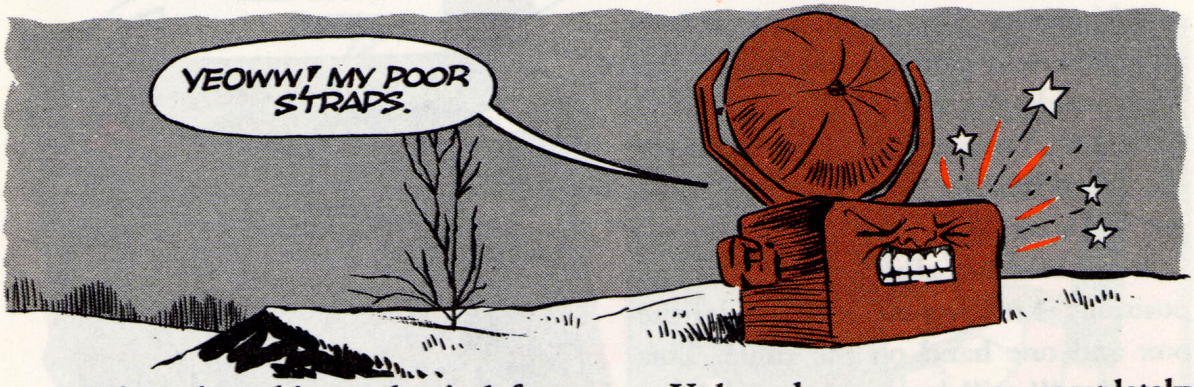


The sets were supplied to the Navy with the tubes as running spares, and they took a wrong turn and got through to Army using units thataway, too.

Their replacement is a third-echelon job. The V201 and V202 usually need recalibration, and you've gotta take the case apart, remove a circuit board, and then put in the V102. That's why it's higher echelon work.

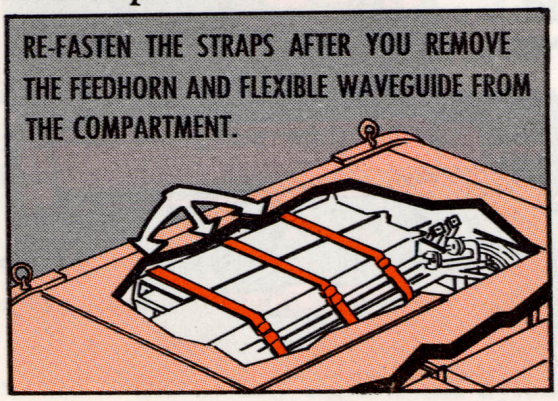
So-o-o-o . . . turn in your spares and forget 'em.

THESE FINGERS CAN PINCH



When those big mechanical fingers of the antenna system for your AN/TRC-80 radio terminal want to reach for the sky, they don't like anything to get in their way.

Like the three tie-down straps for the feedhorn assembly and antenna arms, for example.



Unless those straps are completely out of the way, you can get all sorts of damage when you raise the platform.

Your TM 11-5820-469-10 on the AN/TRC-80 tells you on page 49 to "Unfasten the three straps securing the feedhorn assembly and antenna arms and place them out of the way."

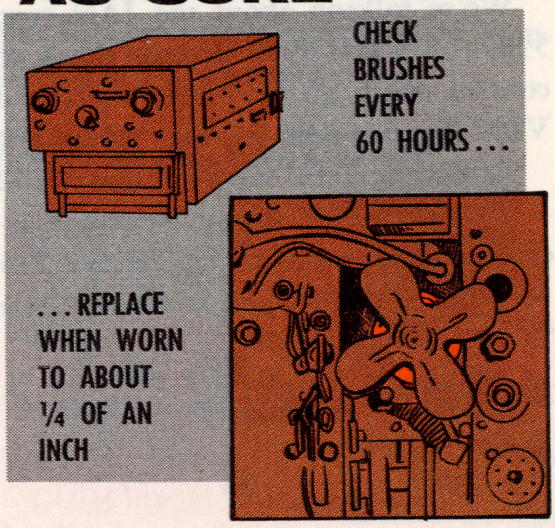
Your best bet is to go a step farther and re-fasten the straps after you remove the feedhorn and flexible waveguide from the compartment. This way there'll be no chance of the straps getting snared when the platform goes up.

Just be sure you unfasten the straps again before you raise the antenna arms.

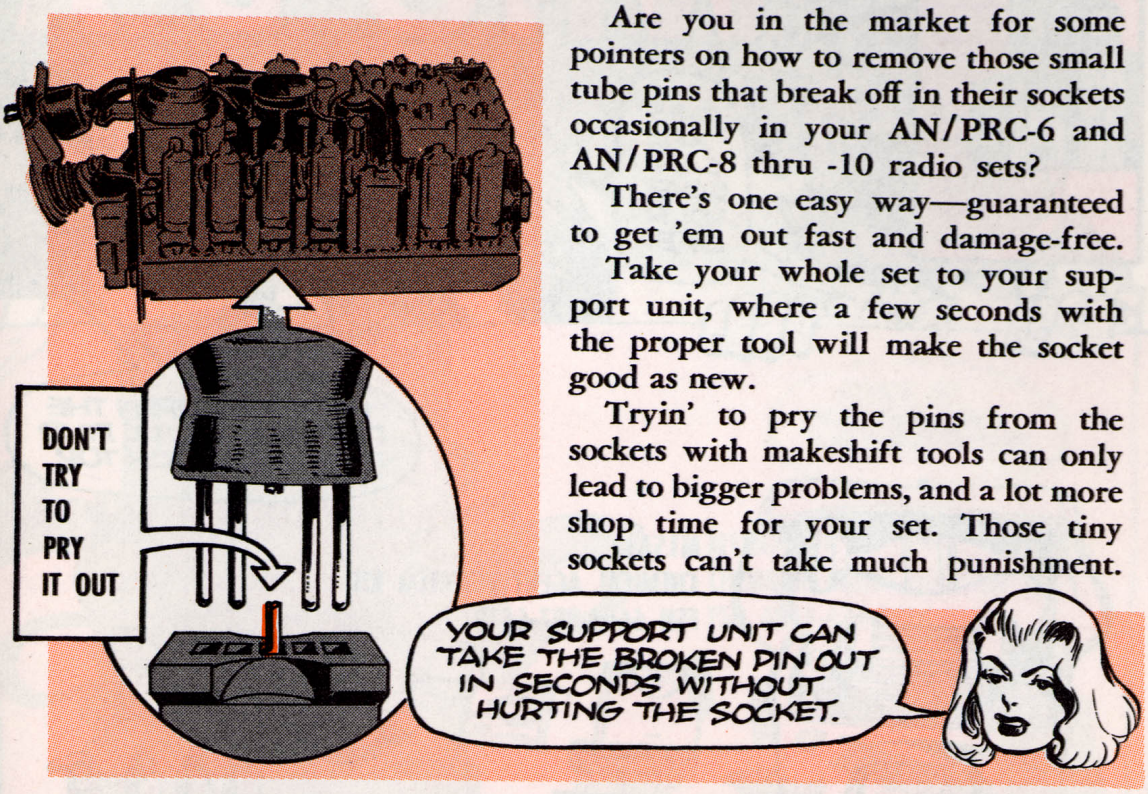
BE TWICE AS SURE

The brushes of the blower motor (B-1501) in your ARC-55 ( ) radio set may go 120 hours between services—but again they may not. And if they don't, things can get mighty hot fast.

To play it safe—and maybe save some blower motors—give those brushes the once-over every 60 hours or so. TM 11-5821-225-24 (Jan 60) gives you the dope. Replace the brushes when they're worn to about a quarter of an inch.



GETTING THE PIN POINT



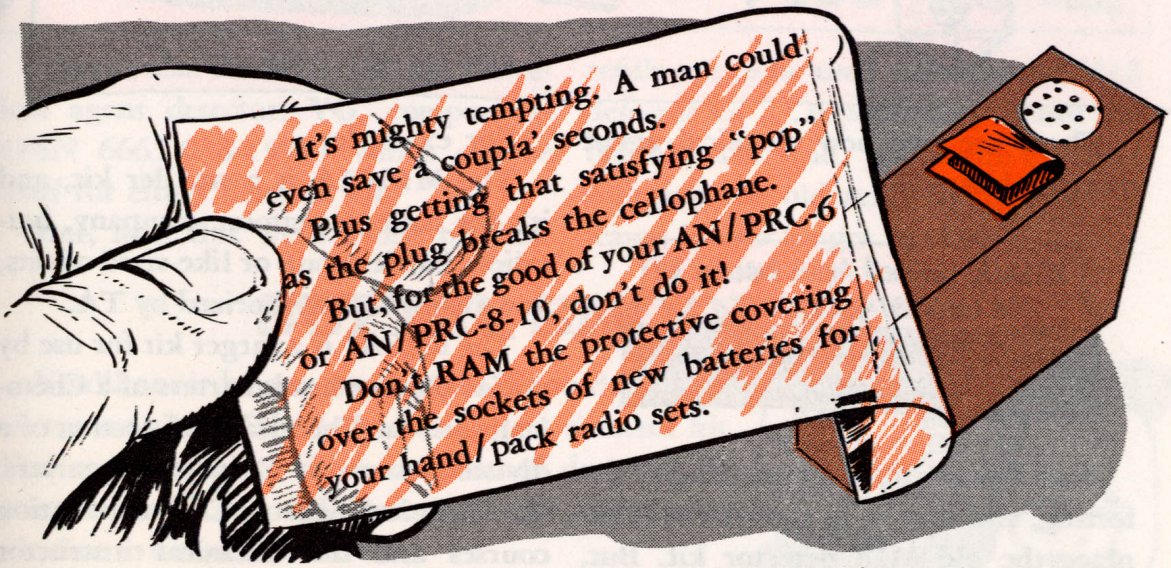
Are you in the market for some pointers on how to remove those small tube pins that break off in their sockets occasionally in your AN/PRC-6 and AN/PRC-8 thru -10 radio sets?

There's one easy way—guaranteed to get 'em out fast and damage-free.

Take your whole set to your support unit, where a few seconds with the proper tool will make the socket good as new.

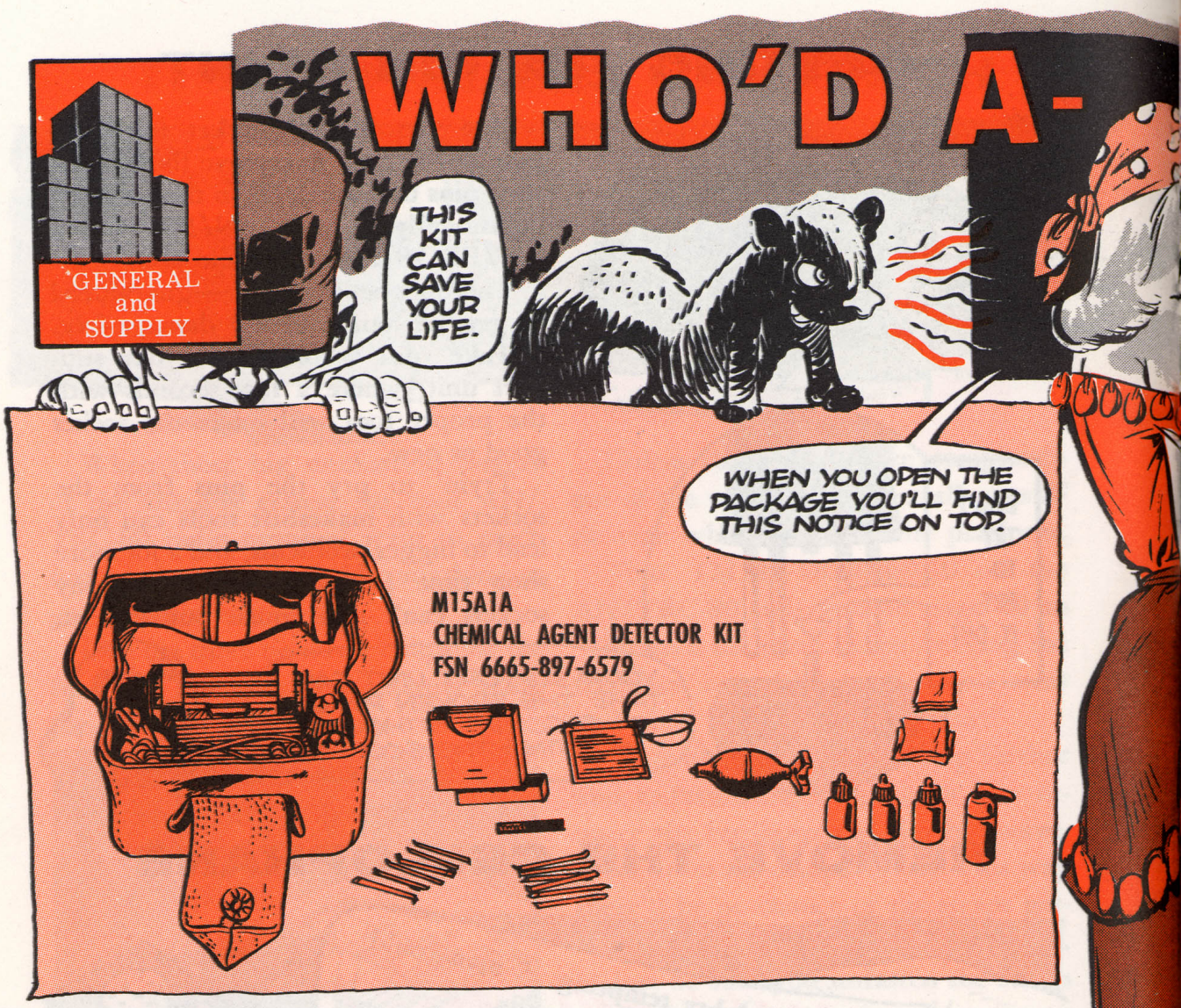
Tryin' to pry the pins from the sockets with makeshift tools can only lead to bigger problems, and a lot more shop time for your set. Those tiny sockets can't take much punishment.

REMOVE THE CELLOPHANE



Before putting in the battery, peel the cellophane cover off the socket . . . and then insert the battery plug.

If you force the plug thru the cellophane, lotsa' times it'll flatten out the cellophane against the contacts of the socket. And that's somethin' you won't have—contact—when a good contact is exactly what you need.



There are two new chemical agent detector kits:

M15A1A, Chemical Agent Detector Kit (FSN 6665-897-6579).

M18A1, Chemical Agent Detector Kit (FSN 6665-674-6076).

Both kits are for the same kind of detecting, and they're in the system to replace the old M18 detector kit. But, hold your horses . . . there's a big fat difference. The M18A1 kit has a much wider range of detection capability. So, the kit you now get depends on the outfit you're in.

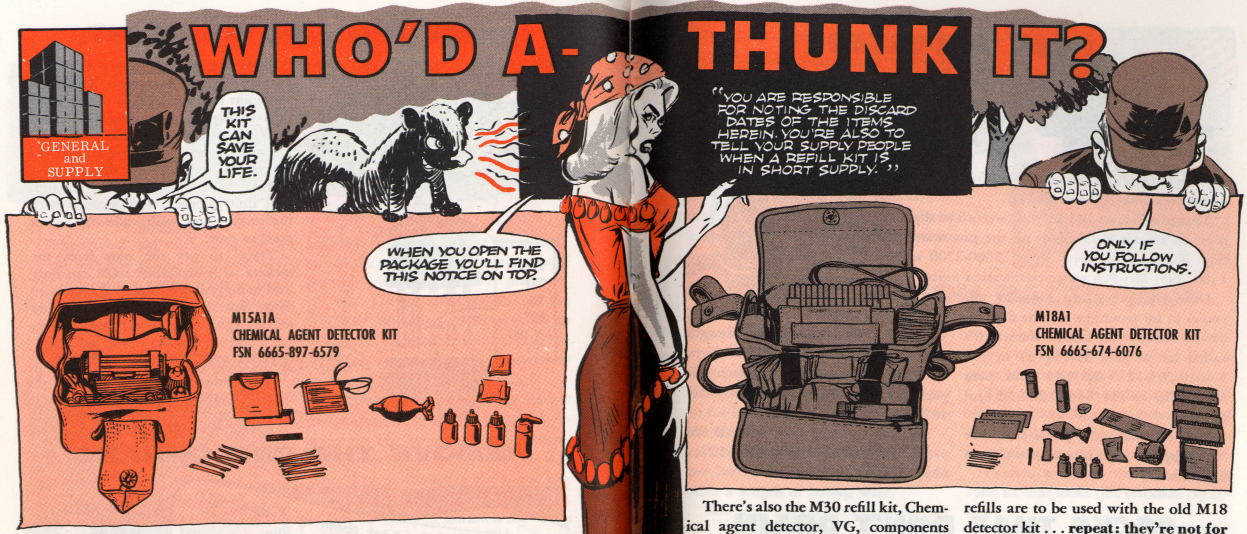
For example:

The M15A1A is a smaller kit, and it's for issue to platoon, company, battalion, battle group or like-sized outfits, and also where authorized by TA.

The M18A1 is a larger kit for use by outfits like the headquarters of a Chemical unit, the Chemical staff section of a division, Army or Corps headquarters, the Chemical School, CBR orientation courses and the Chemical instructor with service schools.

Refills for the kits are: The C-15R1 refill (FSN 6665-892-2339) for the smaller kit. And the C-18R1 refill (FSN 6665-892-2338) for the larger kit.

WHO'D A-THUNK IT?



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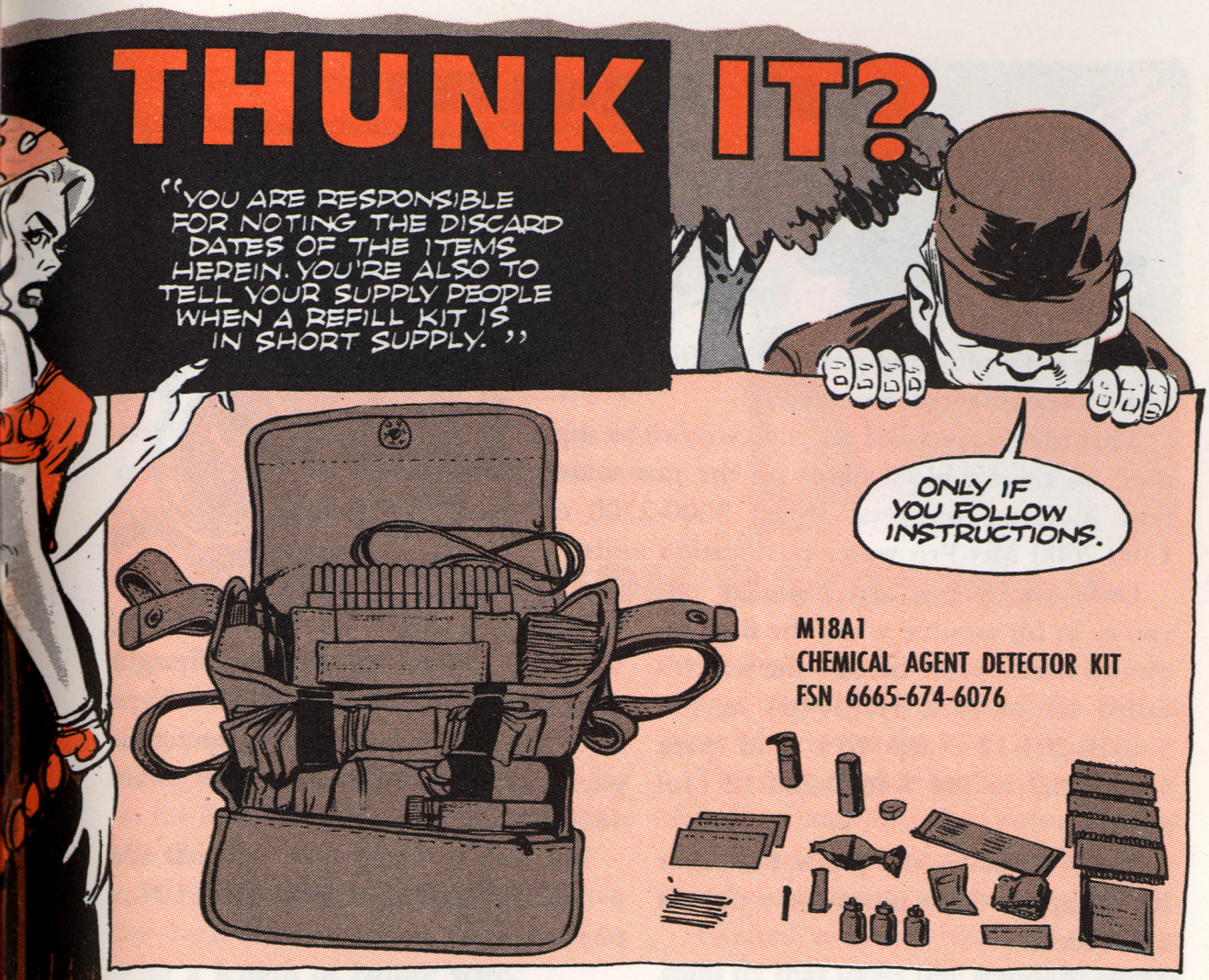
There's also the M30 refill kit, Chemical agent detector, VG, components (FSN 6665-088-1595) which can be used for either detector kit.

But, note this well: None of these refills are to be used with the old M18 detector kit . . . **repeat: they're not for the old kit.** And, you needn't bother ordering the old refill for the old kit 'cause it's no longer stocked.

SUPER SNOOPER

You'll never be a super snooper if you don't keep an eye on your M18A1 chemical agent detector kit. You're supposed to check the discard dates on the parts in the kit and make sure you order more before it's time to discard the old ones.

You can now order extra blue band tubes (25 to a clip) by asking for FSN 6665-856-8236, Detector Tube Assembly Chemical Agent, Mustard-Nerve (H-G). You'll not have to order the C-18R1 refill kit just to get those blue band tubes.



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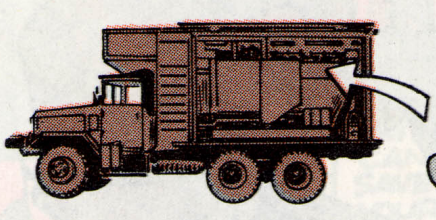
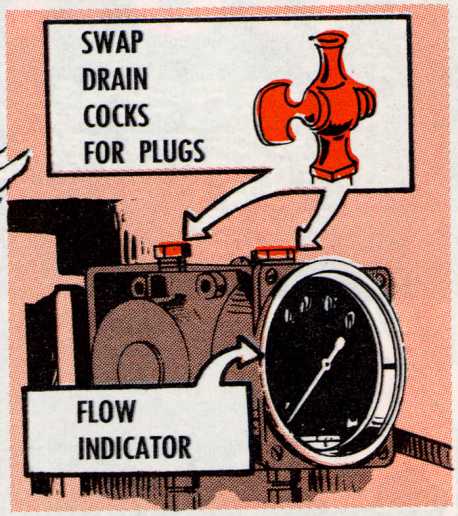
EASY AIR-BLEED





Take out a plug and put it back often enough and its head may get rounded off.

That can happen and set your wrench to slipping on the air-bleed plugs on the raw water flow indicator on your Model 3000-2700 or 1500-2600 Met-Pro water purification units.

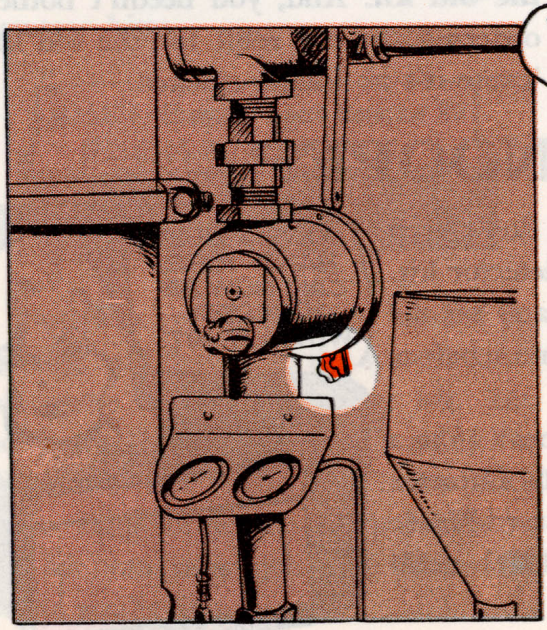
Once the plugs are rounded off, you're in for trouble when the flow indicator needs an air-bleed—the way it's called for in para 31i(3)(d) in TM 5-4610-203-12 (Sep 61) and para 37e(8)(b) in TM 5-4610-204-12 (Jul 61).

You can make the job a lot easier by swapping those plugs for a pair of drain cocks.

What you need is Cock, drain, brass, ⅛-in 27 NPT, tee handle, straight nose, 125 PSI (MIL Spec D-1203 Type A). You get 'em thru Engineer repair parts supply channels, under FSN 4820-287-4267.

But they're listed now in DoD SM 5-1-C7-13-SL, Vol. 1, Stock List (1 Nov 62).

COCKS THAT DON'T DRAIN



On Met-Pro 1500 GPH and 3000 GPH water purifiers, your CV-45 flow control valves have drain cocks for dumping water when you shut the rig down—'specially in freezing weather.

Trouble is, those cocks won't drain the valves without help.

The valves just sit there and hold water, until you break the air lock with a vent hole in the upper edge of the valve cover.

But first—before you reach for that 11/32-in drill—**take the cover down from the valve.**

Otherwise, your drill will bust right through the diaphragm. (A drilled diaphragm is bad news—not to mention the reaming that follows.)

After you drill the 11/32-in hole, run a ⅛" NPT tap through it. Then all you need is a standard brass pipe plug or petcock to re-seal the CV-45 valve when your Met-Pro goes back to work.

SPRAY WAGON BACKSTRAP

Dear Editor,

On our Macleod W-1M5 water spray rigs, pump pressure tends to force the swing coupling on the upper spray bar so far back it pulls the hose loose from the clamps.

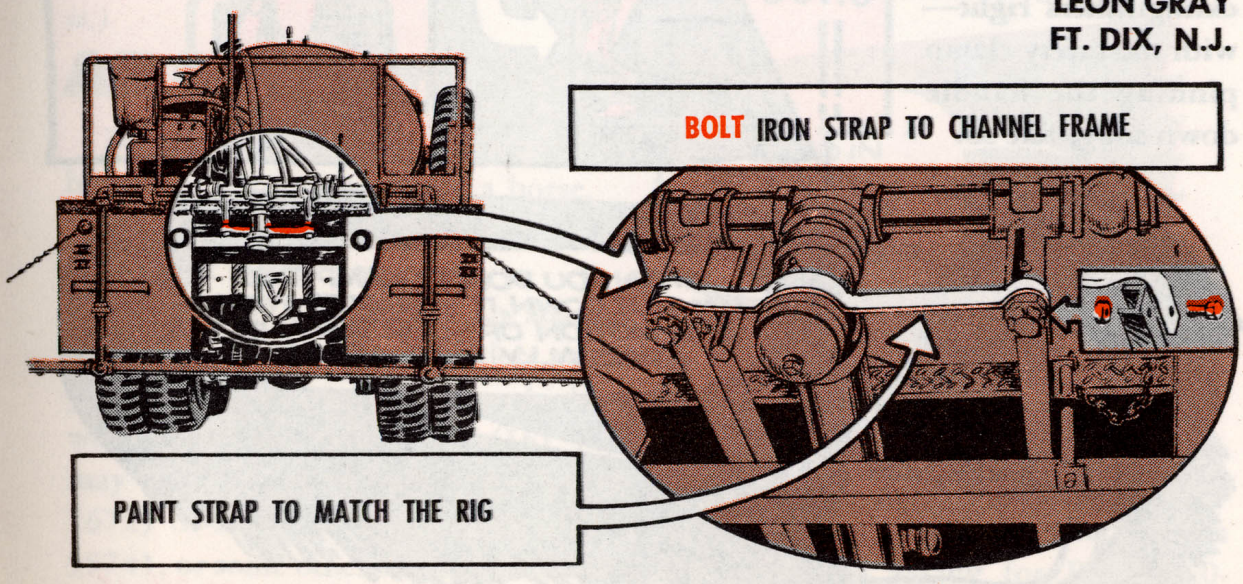
First time this happened, the operator lashed the coupling back in place with a length of baling wire.

But the haywire fix looked like sweat on a shingle. So we got our mechanic to make a permanent fix with a piece of heavy strap iron.

This strap iron brace fits close behind the swing coupling, then passes around the outboard spindles and is bolted to the channel frame under the platform.

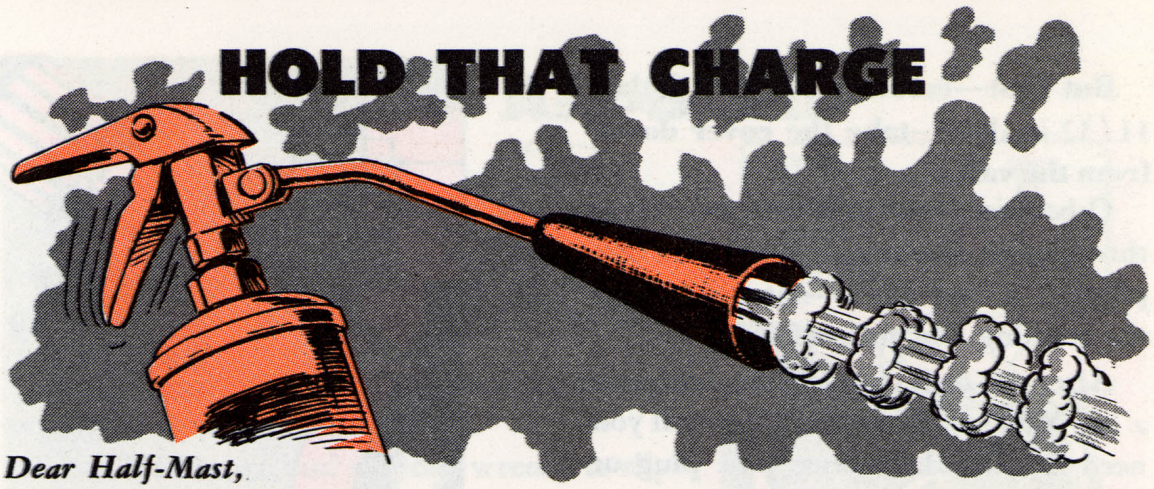
Painted to match the rig, this is a solid fix that looks like standard equipment.

LEON GRAY
FT. DIX, N.J.



(Ed Note—Like the man says—fix it right, and forget it. Just make sure it's bolted so the spray bar is free to shift to right or left.)

HOLD THAT CHARGE



Dear Half-Mast,

We've had trouble holding the charge in the Quick Aid Model CPS-2, 2½-lb. dry chemical type fire extinguishers which we've mounted on all our equipment.

Even new and refilled extinguishers charged to 150 lbs. seem to lose pressure after bouncing around with the equipment for a couple or three days. This means that either the gage goes wacky or the extinguisher is losing its charge.

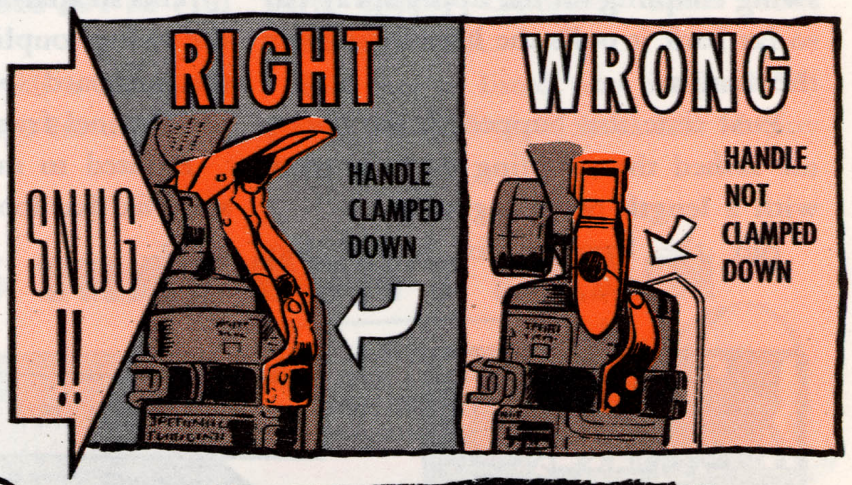
The handles have a safety wire to prevent accidental release and the wire is still tight and unbroken in each case.

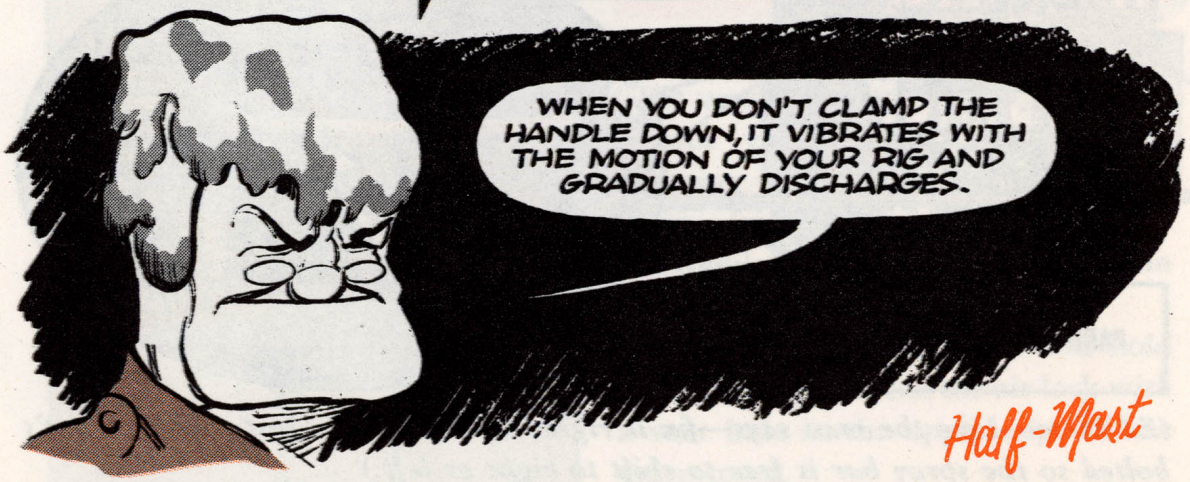
What's the answer?

SFC R. A.

Dear Sergeant R. A.,

No sweat—like a lot of other things, it's all in the mounting. Be sure you mount these and similar type extinguishers right—with the safety clamp pinning the handle down snug, like so:





STILL A GOOD TRICK

Dear Editor,

Lately here in Korea we've been caught short with a fouled up generator and no spares for our M1937 field range.

Here's an old trick from TM 10-701 (Jul 57) that can still save the day:

Get your support guys to saw the generator cylinder in half, take out the old steel wool and replace it with some new wool from your mess. Use a broom handle or the likes to stuff the wool in tight. Then weld the tube together again.

Be real careful, though, you don't hurt the screens at each end of the tube or you might keep fuel from flowing through it.

And watch out you don't breathe in any of the old wool dust. Could give you lead poisoning. Better do the unstuffing job outdoors so's the wind'll blow the dust away from your kisser.

Sp-4 I. LOCKE
Korea

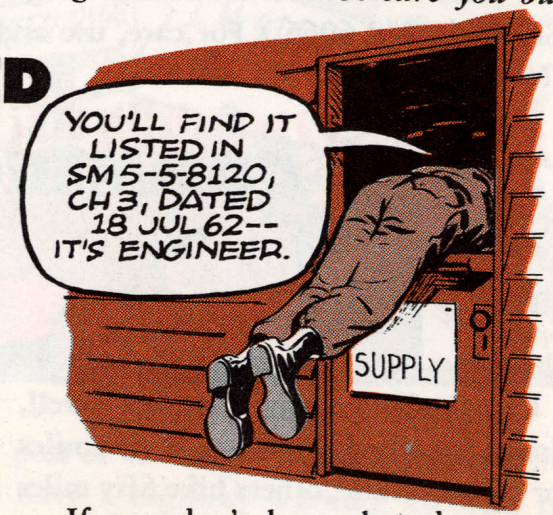
(Ed Note—This'll work, but it's strictly an emergency deal since you should be getting two spare generators with each burning unit. If your back's to the wall and you have to go this route, wear a protective mask while you're handling that contaminated steel wool—with rubber gloves—and then be sure you bury it.)

ADAPTER NEEDED

For the want of a nail . . . well, maybe you're not going to ride a horse.

For the want of an adapter . . . your equipment may be lost.

Why? You have to use an adapter with the old style gas cylinders when you're using the inert gas shielded welding set (FSN 3431-691-1415). You may have a Linde (FSN 3431-972-7672) or a Sigmette (FSN 3431-837-5574), or some other set but you'll still need the adapter if you're using the old style gas cylinders.



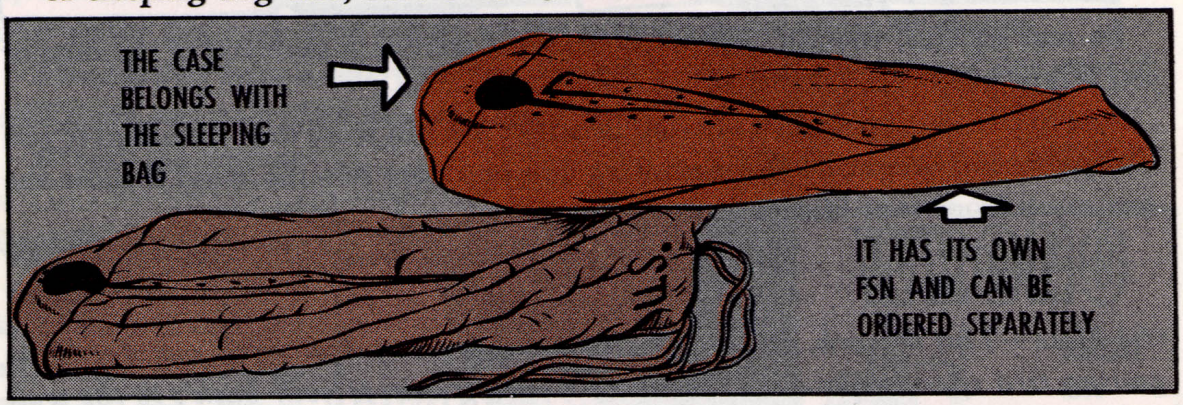
If you don't have the adapter you can get it by asking for FSN 8120-862-6671. It's an Engineer-type supply item.

SLEEPING BAG PM

Your cozy (and costly) mountain sleeping bag won't be cozy for long if you use it without its protective case.

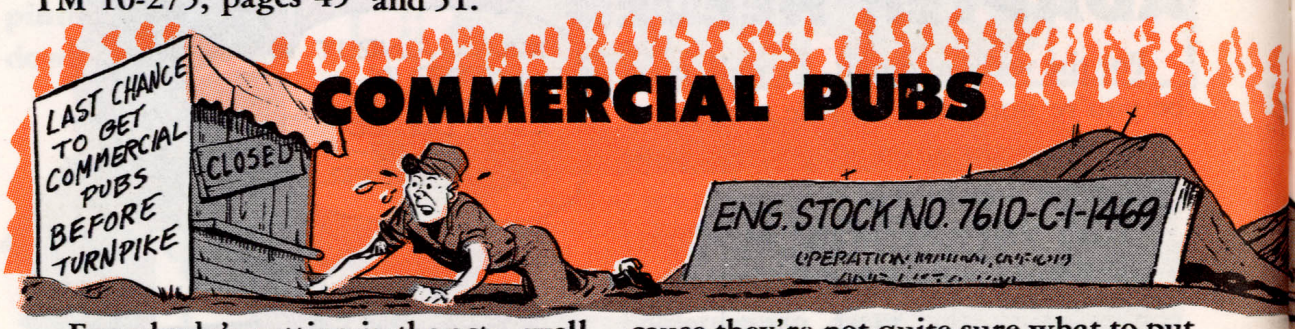
The case belongs with the sleeping bag, but it has its own FSN, so it has to be ordered separately.

To protect your sleeping bag from damage, when you're roughing it, you need the wind resistant, water repellant sleeping bag case, FSN 8465-237-8719 —or sleeping bag case, FSN 8465-237-8718.



Either case can be used with the large sleeping bags (FSN 8465-242-7856 or FSN 8465-242-6064) or with the regular-sized bags (FSN 8465-242-7855 or FSN 8465-242-6065.) For care, use and other info on the bags and cases see TM 10-275, pages 45 and 51.

COMMERCIAL PUBS



Everybody's getting in the act—well, almost everybody. Some walk five miles for their exercise, others hike fifty miles just for a lark, while some get no more exercise than pushin' a pencil along a paper.

Others don't even push the pencil because they're not quite sure what to put down on the paper.

Take, for instance, you need a commercial manual. You can't do a real good maintenance job on some of your Engineer, QM or TC equipment without one. But you don't know just how

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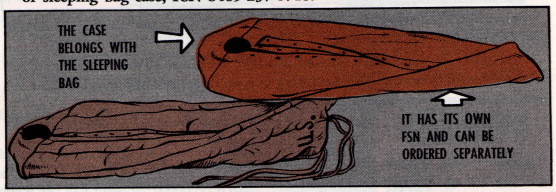

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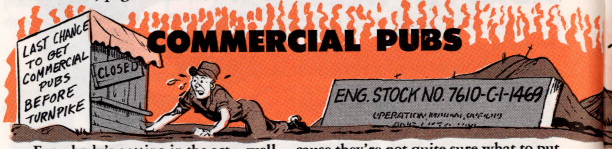

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Take, for instance, you need a commercial manual. You can't do a real good maintenance job on some of your Engineer, QM or TC equipment without one. But you don't know just how to go about getting one.

You've looked all through the DA Pamphlet 310-4, hoping against hope that it would be listed there—but no luck. This lists only Army publications.

So, now what?

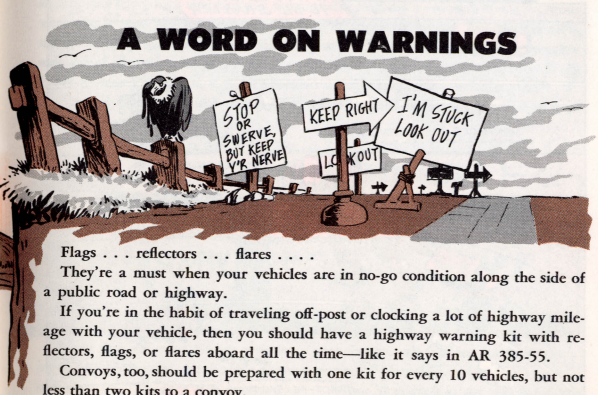
You ask your direct support for help. You fill out a DA Form 1546 asking for the manufacturer's equipment manual that you need. For the QM and Engineer types of commercial equipment you order the manuals just like repair parts.

Be sure that you include the make, model and serial number(s) of the equipment and major components. Also, tell whether you need a maintenance manual, operator's manual, or parts list.

If you ask your direct support for a commercial manual for Quartermaster or Engineer equipment, then they'll request the manual from US Army Mobility Support Center, P. O. Box 119, Columbus 16, Ohio.

Now about those parts and service manuals for commercial design vehicles that you ordered from Transportation —something new has been added. You can no longer get manuals from Fort George G. Meade. In fact, you can't get parts and service manuals from Army sources for commercial design vehicles manufactured before the 1963 models.

What then? You'll have to ask your support to buy them from the nearest authorized dealer, or direct from the manufacturer or the manufacturer's designated regional service representative.



Flags . . . reflectors . . . flares . . . .

They're a must when your vehicles are in no-go condition along the side of a public road or highway.

If you're in the habit of traveling off-post or clocking a lot of highway mileage with your vehicle, then you should have a highway warning kit with reflectors, flags, or flares aboard all the time—like it says in AR 385-55.

Convoys, too, should be prepared with one kit for every 10 vehicles, but not less than two kits to a convoy.

You can get the kits you need thru regular QM supply channels under

MORE

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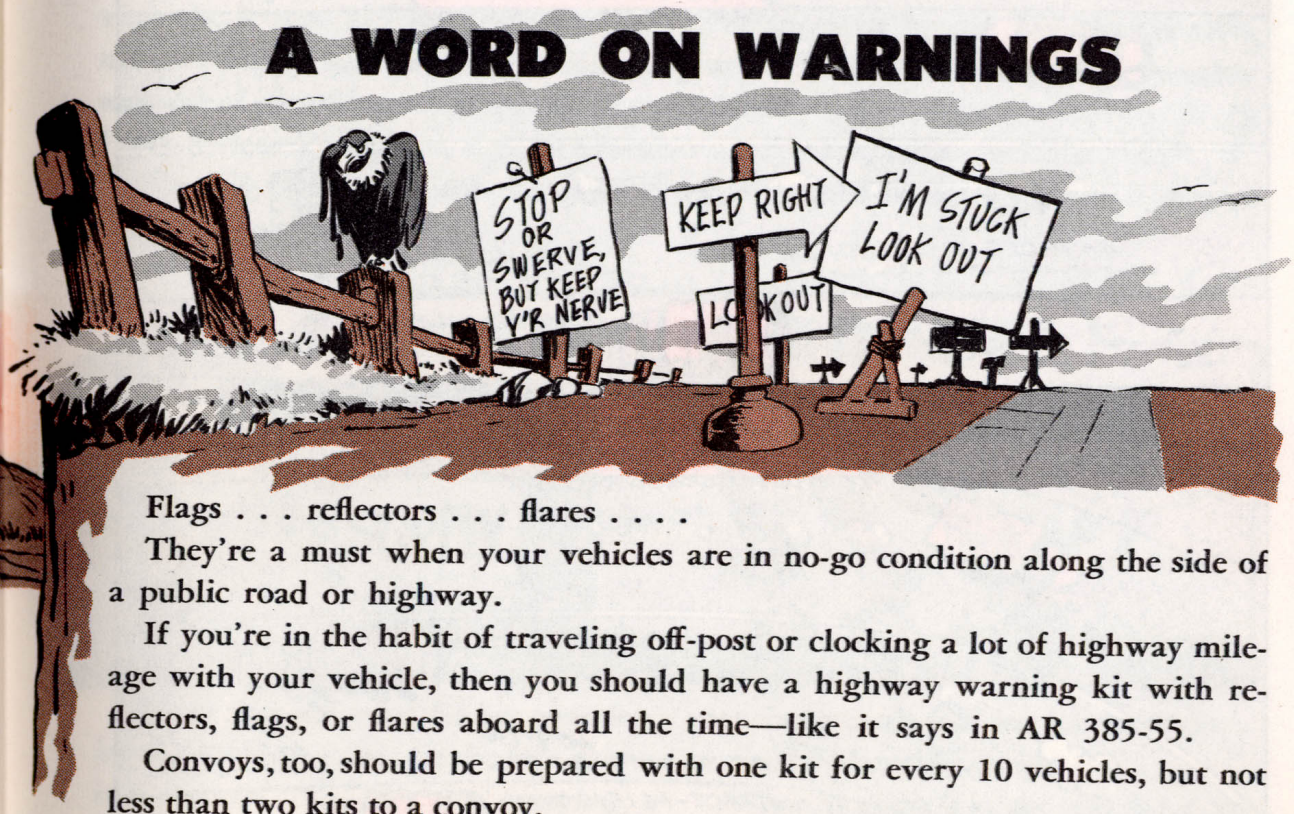
A WORD ON WARNINGS



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PS MORE

FSN 9905-534-8376, Reflector Kit, Highway Warning. The AR is your authority.

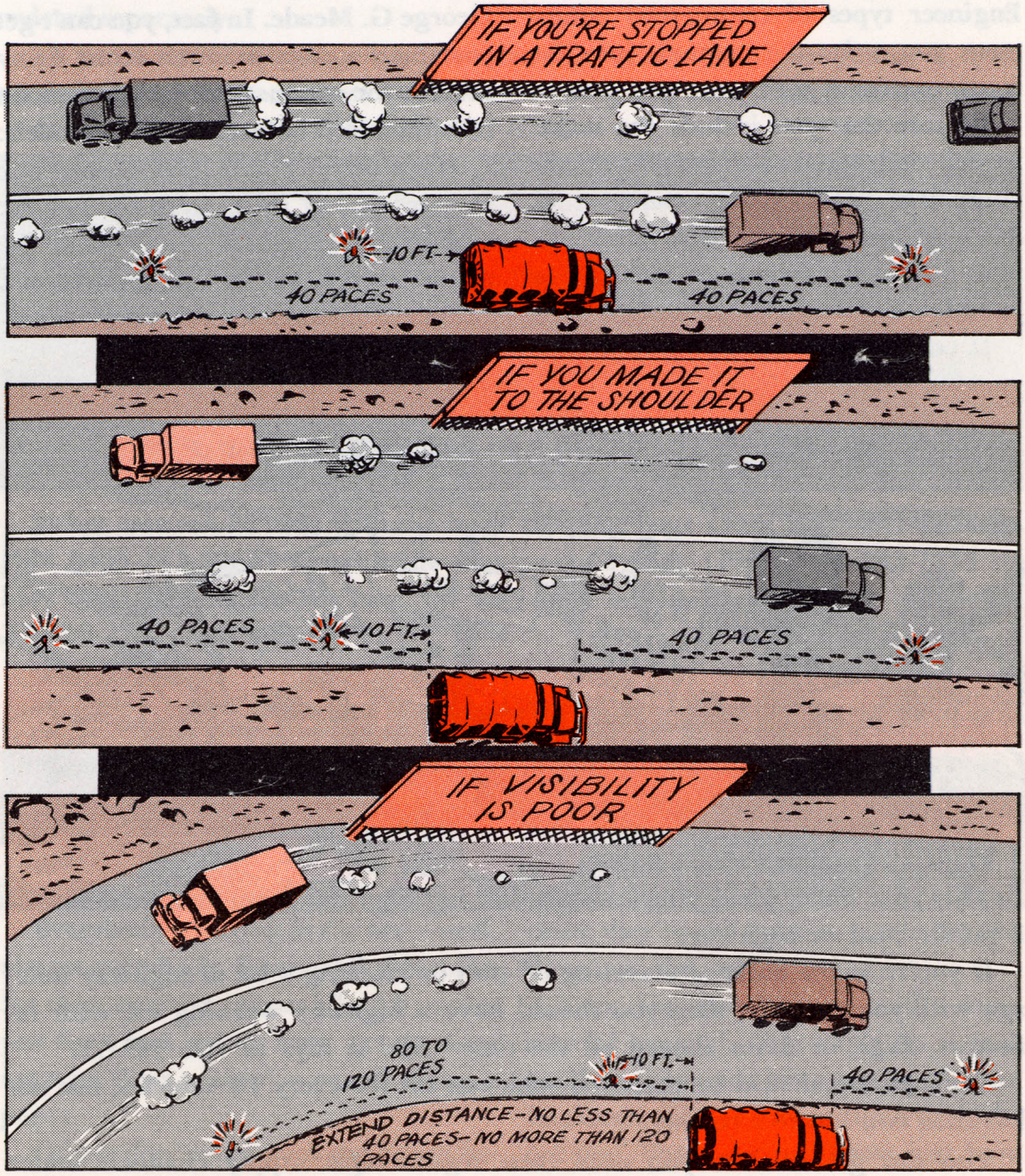
SET 'EM UP RIGHT

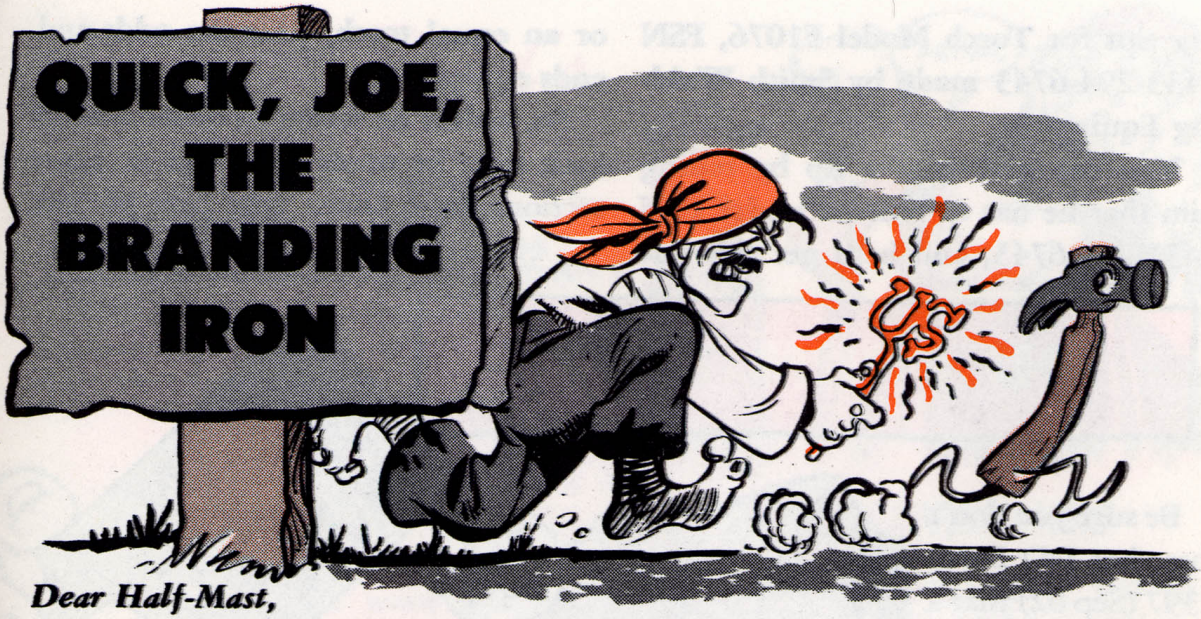
If your vehicle breaks down along the highway, try to get it off the traffic lanes and onto the shoulder of the road —if it's at all possible.

Then, break out your highway warning kit.

From sundown until sunup, you'll need reflectors or flares. During daylight, use reflectors or red flags.

Here's the way to place 'em:





Dear Half-Mast,

Is there any regulation on marking of hand tools?

Our tools seem to "walk off," especially the standard commercial ones the unit buys at the self-service store.

Capt. W. T. C.

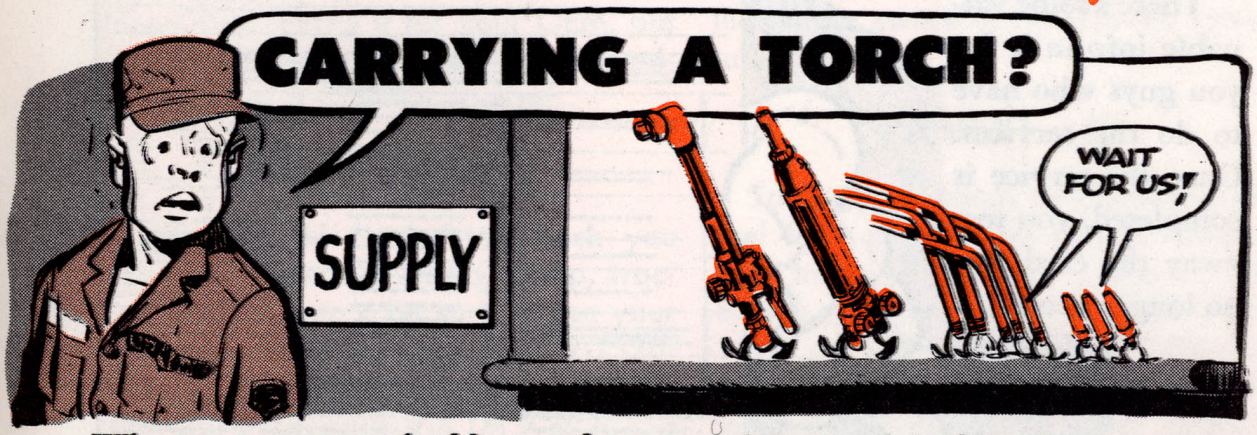
Dear Captain W. T. C.,

I believe that AR 735-5 (Feb 63) is what you're looking for.

In paragraph 8j it says: "To the extent practical, all Government tools and equipment for which the Army is accountable will be so identified by marking with the letters 'US' or 'USA' or equivalent specified by the installation commander unless such marking would impair the utility of an item or another method of identification is specifically required by Army regulations or the Army Procurement Procedure, e.g., production equipment, motor vehicles, etc."

The AR doesn't go into detail as to what method of marking you'll use, so work up your own SOP.

Half-Mast



When you see your buddy wandering around in a daze, maybe he's carrying a torch. No, he's not carrying a torch for the gal he left behind. He's carrying a torch looking for some extra sections and welding tips.

What he doesn't know is that he can no longer order the sections and weld-

PS MORE

ing tips for Torch Model F1076, FSN 3433-294-6743 made by Smith Welding Equipment.

You can give him a tip by telling him that he has to reorder under FSN 3433-294-6743, and he'll get this one or an equal torch, plus the odds-and-ends equipment.

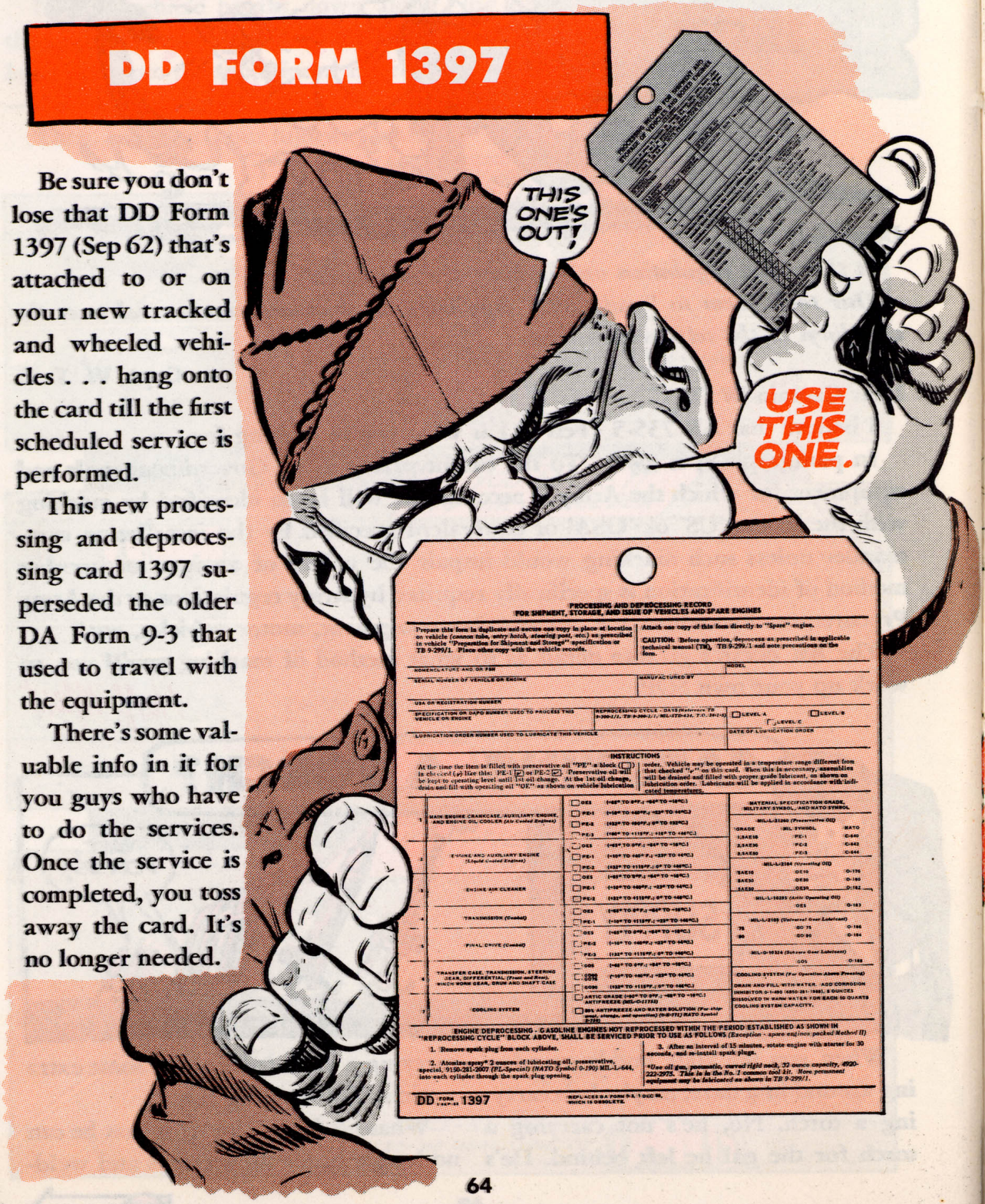
So, unless he wants to order a torch each time he needs some tips or spare sections, he'd better take care of 'em.

DD FORM 1397

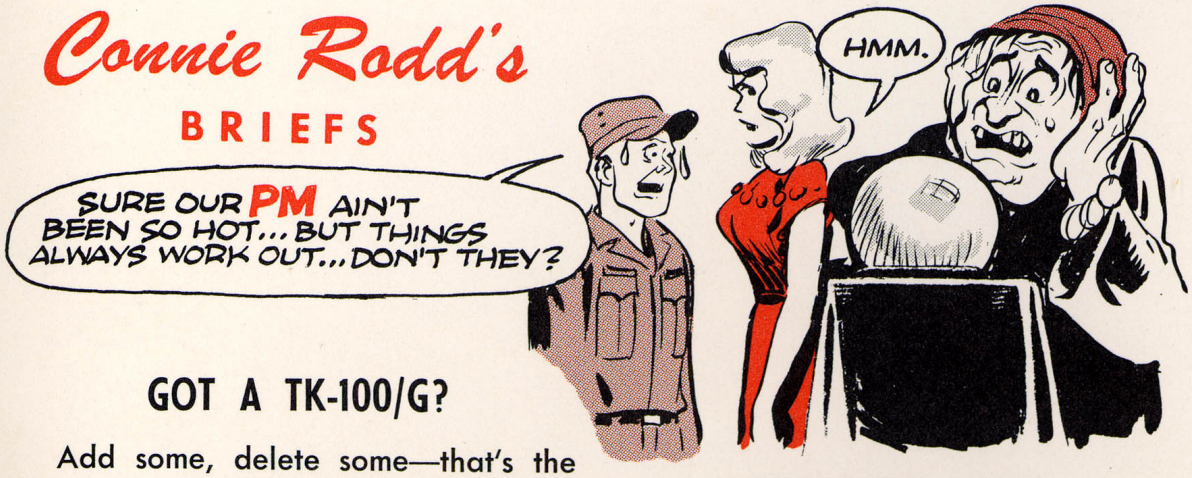
Be sure you don't lose that DD Form 1397 (Sep 62) that's attached to or on your new tracked and wheeled vehicles . . . hang onto the card till the first scheduled service is performed.

This new processing and deprocessing card 1397 superseded the older DA Form 9-3 that used to travel with the equipment.

There's some valuable info in it for you guys who have to do the services. Once the service is completed, you toss away the card. It's no longer needed.



Connie Rodd's BRIEFS



GOT A TK-100/G?

Add some, delete some—that's the word on your TK-100/G tool kit for electronic equipment. SB 11-549 (8 Oct 62) gives you the word and the authority, along with the tools and FSN's.

UP — UP — UP

The good word for you Seminole (U-8) mechs is that the TBO on your 0-480-1 and 0-480-3 engines has been upped from 1500 to 2000 hours. TWX SMOSM-EU-8 03-1400 (15 Mar 63) gives you the green light to change the replacement schedule.

M113 PC SPROCKETS

You M113 PC drivers hurtin' for a ½-in sq drive, 12 pt, 15/16 socket to work on your sprockets? There's talk about authorizing it for your OEM, but for now, borrow one from the Organizational No. 1 Common tool set.

FOR 5-TONNERS

Whatever kind of 5-ton truck you drive (G744-series: Cargo, dump, tractor, wrecker, etc.), be sure to see your new operator's manual, TM 9-2320-211-10 (Mar 63). It supersedes the operator's instructions in TM 9-8028 (13 Jun 55) and TB 9-2320-211-12/1 (10 Oct 61).

RECOVERY HELP

Important poop's been righted for users of the M88 recovery vehicle. The corrected info's in Change 3 (12 Mar 63) to TM 9-2320-222-20. It up-dates all kinds of maintenance and operations facts . . . from stock numbers to road test and stall test info. It supersedes the TM's Changes 1 and 2.

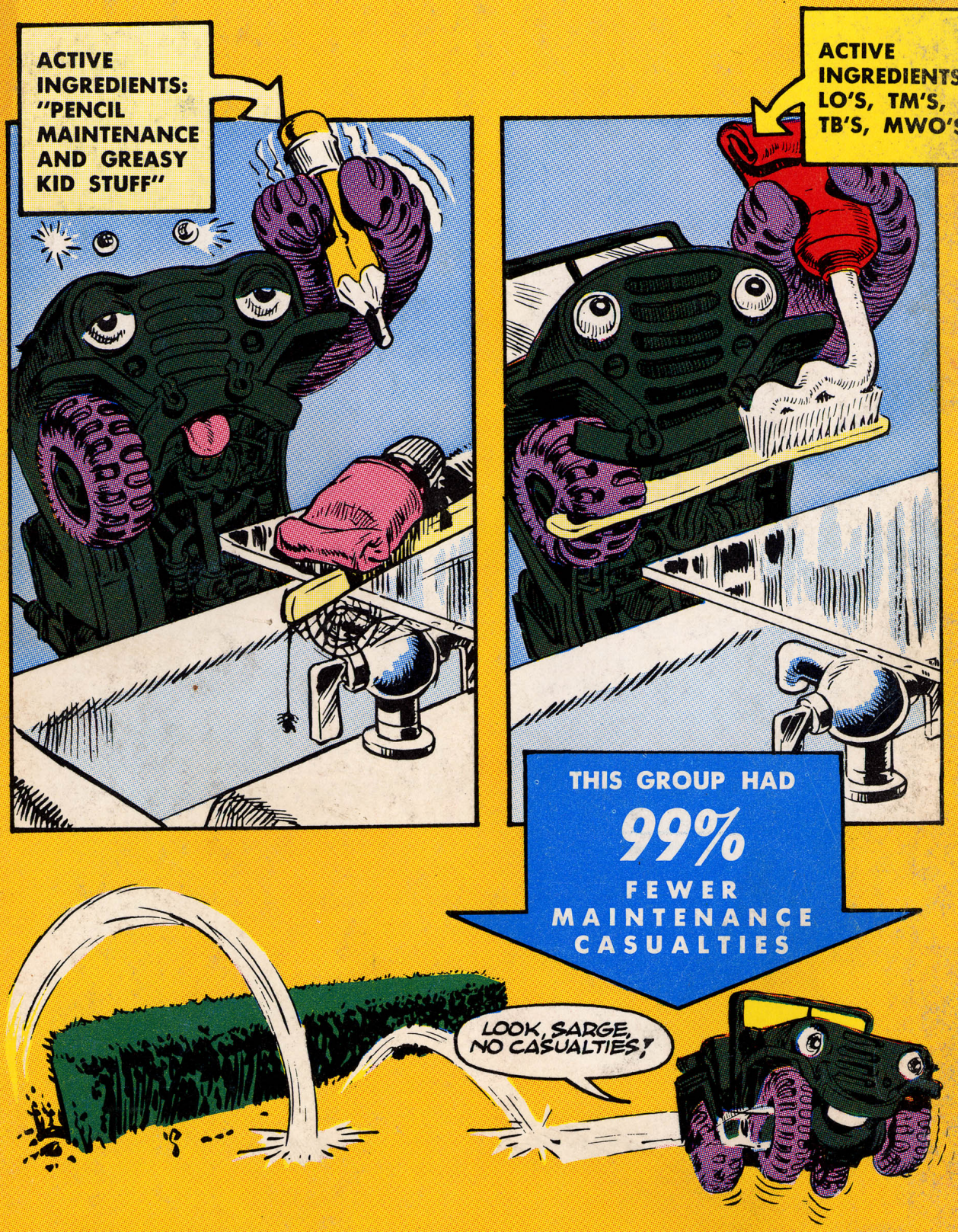
M113 PC SLAVING

On all M113-series personnel carrier vehicles there's one thing you've got to watch for when you're slaving. Make sure the master switch is kept turned OFF in the vehicle being slaved. If you have it ON you can kaput your generator regulator and rectifier. Slave with the master switch in the SLAVED vehicle turned OFF.

ELEMENT — AL

To get your hands on the brand new fuel filter element for use in fuel-servicing trucks M49C, M217C and HC-453, all you need to quote is FSN 2590-690-1576 on your 1546. TB 9-2300-229-10/1 (Aug 62) gives the poop on maintenance for top-notch filter performance. This filter element was added by MWO 9-2300-217-30 (Nov 61).

Would You Stake Your Life right now on the Condition of Your Equipment?



*"PRESCRIBED PUBS HAVE BEEN SHOWN TO BE AN EFFECTIVE CASUALTY-PREVENTIVE FACTOR THAT CAN BE OF SIGNIFICANT VALUE WHEN USED IN A CONSCIENTIOUSLY APPLIED PROGRAM OF PREVENTIVE MAINTENANCE AND REGULAR PROFESSIONAL CARE."

RESEARCH COUNCIL, AMALGATED ASSN. OF P.S. MAGAZINE READERS